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Labour Statistics: Concepts, Sources and Methods

A comprehensive description of the concepts and definitions underpinning labour statistics and the data sources and methods used to compile them.

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Guide to labour statistics

See our [Guide to labour statistics \(/statistics/understanding-statistics/guide-labour-statistics\)](/statistics/understanding-statistics/guide-labour-statistics) for summary information on labour market topics. It complements the detailed information in Labour Statistics: Concepts, Sources and Methods by providing practical guidance on labour measures, their purpose and how to use them.

Labour Statistics: Concepts, Sources and Methods provides a comprehensive account of the concepts and definitions underpinning Australian labour statistics, and the data sources and methods used to compile them.

Labour statistics are some of Australia's key economic statistics. Labour is the aggregate of all human physical and mental effort used in the creation of goods and services.

Labour statistics are about people, their participation in work, their success in finding employment, their earnings and other benefits, their type of work, their working hours and conditions. Labour statistics provide insight into the economy and the effects of labour market policy settings, through measures related to the demand for labour (employment, job vacancies); to its supply (employment, hours worked, unemployment, underemployment); and to its price (wages and labour costs).

Overview

About labour statistics guide

See our [About labour statistics guide \(/statistics/understanding-statistics/guide-labour-statistics/about-labour-statistics-guide\)](/statistics/understanding-statistics/guide-labour-statistics/about-labour-statistics-guide) for summary information about the ABS labour statistics program, labour measures, data sources and information available. It complements the detailed information in Labour Statistics: Concepts, Sources and Methods.

Scope of Australian labour statistics

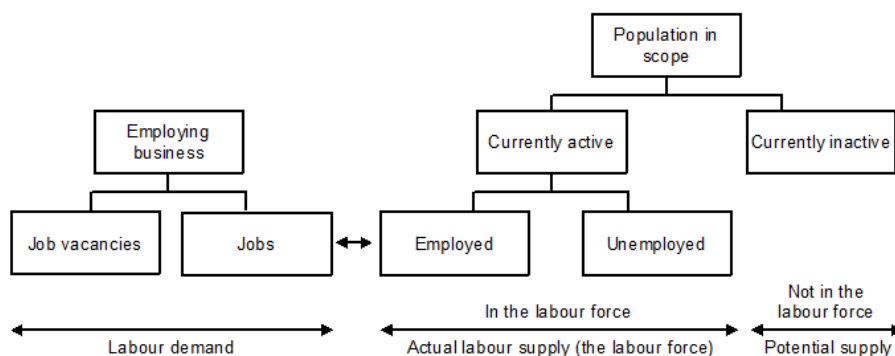
Labour statistics provide information on four key components related to work and the broader labour market: people, jobs, hours worked and labour payments, including:

- People: e.g. the number of people working, looking for work and not working; their demographic and personal characteristics; the efforts they have undergone to find work; their experience in employment, and the amount of work they do.
- Jobs: e.g. the number of filled and vacant jobs in the economy; the duration of the jobs; the number of jobs held by employed people, job mobility.
- Hours worked: e.g. the number of hours actually and usually worked by people in jobs; the number of hours paid for by employers; hours sought by the unemployed and additional hours preferred by the underemployed.
- Payments: e.g. average weekly earnings; hourly earnings, earnings distribution; compensation of employees and wage price indexes.

The concepts of supply and demand of labour are integral to each of these four topics. Labour statistics provide information on the total demand for, and supply of, labour.

Boundaries are necessary to define the scope and treatment of activities that occur within the economy and within the labour force. In Australia, the concept of economic activity underlies measures of the economically active population, which in turn is used to define the labour force as well as employing enterprises. For more information on economic activity, enterprises, and the economically active population, see the section: Institutional Units and the Economically Active Population.

The scope of labour statistics



Outlines the scope of Labour Statistics as produced by the Australian Bureau of Statistics. The labour force framework classifies the in-scope population into three mutually exclusive categories: employed, unemployed and not in the labour force. The employed and unemployed categories together make up the labour force, which gives a measure of the number of persons contributing to, or actively looking and immediately available for, the supply of labour at that time. The third category (not in the labour force) represents the currently economically inactive population. Labour statistics provide information on the total demand for and supply of labour; filled and vacant jobs; underemployment; the price of labour; and many other topics.

Uses and users of labour statistics

Labour statistics are used to study the economic behaviours of employers and employees in response to changing prices, profits, wages and working conditions. They also provide information about the structure of the labour force and its relationship with the wider economy.

Labour statistics have two broad objectives:

- The measurement of the extent of available and unused labour capacity, in time and human resources, for the purpose of macro-economic monitoring and human resources development planning; and
- The measurement of the relationships between employment, income and other social and economic characteristics, for the purpose of formulating and monitoring employment policies and programs, income-generating and maintenance schemes, vocational training and other similar programs.

The first broad objective in collecting data on the economically active population may be labelled as the economic perspective, and the second as the social perspective. Under each perspective, there are several more specific measurement objectives.

Macro-economic monitoring

From an economic point of view, a major objective of collecting data on the economically active population is to provide basic information on the size and structure of a country's workforce. Data collected at different points in time provide a basis for monitoring current trends and changes in the labour market and in the employment situation. These data, supplemented by information on other aspects of the economy, including information on activities outside the strict definition of economic activity, provide a basis for the evaluation and analysis of the macro-economic policies of a country. The unemployment rate, in particular, is widely used as an overall indicator of the current performance of a country's economy.

Workforce planning and development

Another objective in collecting data on the economically active population is to provide a basis on which to measure labour supply, labour input and the extent to which available human resources are being utilised in the production process of the economy. Such information is essential for planning and formulating policies on the development of human resources.

Labour supply refers to the population which furnishes the supply of labour for the production of goods and services during a given period; the amount of time that the population works or is available for work during that period; the intensity of work; and the level of training and skill of the population. Labour input is related to labour supply, and refers to the actual utilisation of the available labour. It corresponds to the number of workers at work, their actual time input, productivity and use of skills.

Information on persons outside of the economically active population (e.g. persons not in the labour force) or certain activities outside of economic activity (e.g. home duties or volunteering) supplements these data and allows for a more complete analysis of available human resources. Most of these elements for measuring labour supply and labour input are obtainable from household surveys, but others, such as productivity, use of skills and intensity of work may be better obtained from other sources of data, or from combinations of data from different sources.

Employment policies

Statistics on the economically active population are essential to the design and evaluation of overall government policies aimed at promoting and creating employment. These may include training programs, schemes to help people start or return to work, community work programs, assistance in setting up an enterprise, wage subsidies, tax exemptions and other positive incentives for employment promotion.

The relevant statistics, when broken down by sex, age group, occupational categories and branches of economic activity, also provide essential material for assessing the social effects of government employment policies. Further to this purpose, information is needed on changes in the level of employment and unemployment among women, young persons, elderly workers, Aboriginal and Torres Strait Islander peoples, and other population groups of particular social concern.

Information on activities outside of economic activity, such as the supply of voluntary labour or the care of children at home, provide further information to support the development of effective employment policies.

Income and wealth policies

Employment is the main source of income for most people, and therefore employment statistics constitute a major element in formulating and evaluating government policies on income generation and maintenance, alleviation of poverty and redistribution of income. They can also be used in assessing the effects of price stabilising, structural adjustment and fiscal consolidation policies on the employment and income situation of the working population and its different subgroups. The joint measurement of employment and income provides the basis for analysing the adequacy of employment of different categories of workers, the income-generating capacity of different types of economic activities and the incidence of different forms of employment related economic hardships.

Data on employment and income, disaggregated by occupation, branch of economic activity and other socio-demographic characteristics, are needed in particular for negotiations among social partners, such as collective bargaining and programs for equal opportunity and treatment in employment. Data on labour provided by the persons not in the economically active population supplements information on income and wealth, particularly as it relates to decisions around labour force participation and domestic expenditure (e.g. the decision to care for children at home rather than to work and to pay for childcare).

Other uses

Statistics on the economically active population may also serve a variety of other analytical purposes. Data may be used to explain the past growth of an economy and to study the demographic and socio-economic factors affecting the size and composition of a workforce, or they can be used to make projections of the economically active population and its components as a basis for socio-economic planning. Employment characteristics can serve as explanatory variables in many fields of research, ranging from testing theories on the segmentation of the labour market to formulating demographic models.

Data may be used to inform the public about the state of employment or to focus attention on particular issues, such as child labour or race or gender based discrimination, or alternatives to economic activity such as volunteering. Employment statistics may give useful indications to business planners on the future course of the economy. Statistics about persons not in the labour force and certain non-economic activity (e.g. childcare) may indicate structural changes in the composition of the labour force.

Labour statistics: A user perspective

Wide spectrums of users require information about labour statistics. These range from users with broad, general needs for information about the main aggregates, to those with highly specialised needs relating to particular data items. The main categories of users, and their likely needs, are set out below:

- The Commonwealth Treasury, the Reserve Bank of Australia (RBA), the Productivity Commission and other public sector economists - a reasonably detailed understanding of Australian sources and methods to support their interpretation of the estimates and forecasting of economic aggregates.
- Financial sector economists, economists working for interest groups, national and international investors, public sector economists in other countries and international credit rating agencies - a reasonably detailed understanding of the conceptual framework, the sources and how the estimates are compiled, to support their interpretation of the statistics and provision of advice to their organisations and clients.
- Trade unions, employer associations, industrial tribunals and lobby groups - a reasonably detailed understanding of the conceptual framework, the sources, and how the estimates are compiled, with more detail on particular items to support research.
- Financial journalists - a broad understanding of the conceptual framework, how the estimates are compiled, and the main outputs, to support media commentary on the current performance of the Australian economy. These users may occasionally require a more detailed understanding of particular aspects.
- Academic researchers - a reasonably detailed understanding of the conceptual framework, the sources and how the estimates are compiled, with more detail on particular items to support research and modelling.
- International agencies such as the International Labour Organisation (ILO), the Organisation for Economic Cooperation and Development (OECD), the World Bank and the United Nations Statistics Division - generally these agencies require a reasonably detailed understanding of all aspects of the statistics. Their uses encompass monitoring the extent of country adherence to international standards and practices, the compilation of country groupings and world economic statistics, assisting in understanding differences in the economic performance of countries, and modelling work to support the preparation of country reports.
- Students at upper high school level or undergraduate level at university - a broad understanding of the conceptual framework, how the estimates are compiled and the main outputs (publication tables, written and graphic analysis, and explanatory notes), to understand the role of education in employment outcomes in the Australian economy.
- Teachers/teaching academics - a broad understanding of the conceptual framework, how the estimates are compiled and the main outputs, to support teaching about Australia's economy.
- Labour statisticians in other countries - a reasonably detailed understanding of Australian sources and methods, with more detail on

particular accounts or items to compare with their own practices.

Labour statistics are used extensively in both economic and social analyses. They are used in the analysis, evaluation, and monitoring of: the economy; the labour market; a wide range of government policies (relating in particular to employment, income support, industrial relations); and population groups of particular concern (women, younger persons, older persons, indigenous people, etc.).

History of Australian labour statistics

Some statistics relating to wage levels, hours of work, labour organisations and unemployment were available in the separate self-governing colonies of Australia in the nineteenth century, when separate statistical bureaux were set up in the various states. However, it was only after Federation in 1901, the subsequent enactment of the Census and Statistics Act in 1905, and the establishment of the Commonwealth Bureau of Census and Statistics in 1906 (later abolished and replaced by the Australian Bureau of Statistics in 1974), that the ground was prepared for the compilation of uniform labour statistics for the whole country. In the first national census of 1911, information was collected on occupation, wage rates, unemployment and duration of unemployment. In the same year a Labour and Industrial Branch was set up within the Commonwealth Bureau of Census and Statistics, with the responsibility for publishing a report 'Trade Unionism, Unemployment, Wages, Prices and the Cost of Housing 1891-1912'.

Responsibility shortly thereafter extended into the fields of industrial disputes, trade unions and industrial accidents. This established the pattern of labour statistics that was to be followed more or less unchanged until the early 1960s. The principal sources of information available during this era were:

- Population censuses – undertaken in 1911, 1921, 1933, 1947 and 1954;
- Trade unions – details of wage rates, numbers of unemployed union members and industrial disputes; and
- Administrative sources – details of awards, determinations, industrial agreements and industrial accidents provided in State and Federal statutory reports were all used in the production of labour statistics.

The first regular statistical measure of 'employment' in Australia dates from the introduction of Payroll Tax in 1941. This provided an administrative source of information suitable for deriving civilian employment by industry for each state and Australia, and average weekly earnings for employed wage and salary earners.

The Commonwealth Employment Service (CES) was established in 1947 to assist people seeking employment to obtain jobs best suited to their qualifications, skills, training and experience, and to assist employers seeking additional labour to obtain people best suited to their needs. As a by-product, the CES produced measures of unemployed persons awaiting placement, as well as measures of vacancies notified by employers. The unemployment measure of the CES remained the official measure of unemployment in Australia until the 1970s. Since one of the principal requirements for qualifying for unemployment benefits was registration with the CES, a high degree of coverage resulted.

The integration of the separate State Statistics Bureaux with the Commonwealth Bureau in the late 1950s (though the Tasmanian integration agreement had been reached in 1924) allowed the resultant statistical organisation to place more emphasis on direct collections (more in line with international practices), and less emphasis on administrative by-product data.

The Commonwealth Bureau of Census and Statistics introduced household surveys in 1960, primarily to provide more detailed and comprehensive measures of the labour force than could be provided from administrative data sources (such as the CES series). Initially the program of household surveys comprised only the LFS, which was conducted in capital cities and on a quarterly basis. In 1964 the LFS was extended to the whole of Australia, and in 1978 it was expanded to a monthly frequency, when the Commonwealth Government decreed that it would provide the official measures for employment and unemployment. A supplementary topic was included with the LFS for the first time in November 1961, and this concept has been gradually extended so that a number of months in each year now include supplementary questions on one or more topics. In 1994 the LFS also became the vehicle for a continuous survey of income and housing costs.

In the 1980s the program of household surveys was further expanded to include a program of Special Social Surveys. These surveys collect in-depth information about a population group or subject area of interest, as well as a range of labour force data for the population in scope. In recent years two Special Social Surveys have focussed on labour topics - the longitudinal Survey of Employment and Unemployment Patterns (1994-1997), and the Survey of Employment Arrangements, Retirement and Superannuation (2007). In 1993, the quarterly Population Survey Monitor was introduced. This survey vehicle was designed to collect small amounts of data about simple topics at a reasonable cost, and to output results in a timely manner. It was discontinued in 2000.

In addition to household surveys, the Commonwealth Bureau of Census and Statistics also introduced labour employer surveys in the 1960s. The program of employer surveys initially comprised an annual survey of employing businesses, which was designed to supplement data being derived from payroll tax records to produce a quarterly average weekly earnings series. Conducted each October, the survey collected detailed dissections of earnings and hours paid for, for various categories of jobs (adult and junior, full-time and part-time, managerial and non-managerial) for both males and females. The quarterly series of average weekly earnings provided limited information about the composition of earnings, and no information on occupational earnings or the distribution of earnings. To supplement the quarterly series, a more extensive survey producing this information was introduced in 1974. Currently conducted

biennially, this survey is known as the Survey of Employee Earnings and Hours. A survey of job vacancies was also launched in 1974.

By 1981 it was recognised that the payroll tax series used to produce the average weekly earnings and civilian employee series had deteriorated significantly in terms of coverage, due to increasing payroll tax exemptions. Both series were discontinued and replaced with new series based on two new quarterly surveys of employers - the Survey of Average Weekly Earnings (introduced in 1981 and subsequently modified in 1983), and the Survey of Employment and Earnings (introduced in 1983). The mid 1980s also saw the introduction of an irregular survey of labour costs in 1985-86, which in the early 1990s was supplemented by a series of surveys on training expenditure (1989, 1990, 1993, and 1996). In 1997 the quarterly Wage Cost Index was introduced.

As described in [Information Paper: Outcomes of the Labour Household Surveys Content Review, 2012 \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6107.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6107.0), the ABS conducted a review of content included in the labour household survey program in 2010-11. The review aimed to improve the relevance of data released, maximise the coherence of interrelated topics and minimise the duplication of content. The scope of the review included the LFS, labour supplementary surveys and labour Multipurpose Household Survey topics. A major outcome of the review was the consolidation of a range of content collected across labour supplementary surveys into two annual collections. Content collected in the supplementary Employee Earnings, Benefits and Trade Union Membership and Forms of Employment surveys was combined and is now included in the content of the Characteristics of Employment supplementary survey, conducted annually each August from 2014. Content collected in the supplementary Persons not in the Labour Force, Underemployed Workers, Job Search Experience and Labour Mobility surveys was also combined and is now included in the content of the Participation, Job Search and Mobility supplementary survey, conducted annually each February from 2015.

Concepts and sources

This section discusses the fundamental underlying statistical concepts, and classifications, that are important to measuring and understanding the labour market. This includes:

- Institutional units and the economically active population
- The labour force framework
- Employment
- Employment arrangements
- Jobs
- Hours of work
- Unemployment
- Underutilised labour
- Not in the labour force
- Job vacancies
- Earnings
- Workplace relations
- Labour productivity
- Occupational injuries and diseases
- Classifications used in labour statistics

Institutional units and the economically active population

‘Institutional units’ and the ‘economically active population’ form the basis of many labour statistics. A clear understanding of the ‘institution’ and of ‘economic activity’ is fundamental to the correct definition of these groups.

This chapter discusses the institutional units from which data are collected by the ABS in its business and household surveys. It also explains the concepts underlying measures of the economically active population produced by the ABS. These include the scope of economic activity and the United Nations System of National Accounts (SNA) production boundary, the scope of the economically active population, and the differentiation between current and usual economic activity.

The definition and measurement of institutions, which create jobs and therefore generate demand for labour services of the economically active population, and economic activity, by which the economically active population produce goods and services, are both governed by international standards and guidelines. The fundamental definitions of both are laid out in the 2008 SNA.

Standards and guidelines for measuring the economically active population are set out by the International Labour Organisation (ILO), and were first presented in the ‘[Resolution concerning statistics of the economically active population, employment, unemployment and underemployment, 1982’ \(No. 170\) \(http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/guidelines-adopted-by-international-conferences-of-labour-statisticians/WCMS_087481/lang--en/index.htm\)](http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/guidelines-adopted-by-international-conferences-of-labour-statisticians/WCMS_087481/lang--en/index.htm), which was adopted by the Thirteenth International Conference of Labour Statisticians (ICLS). These standards and guidelines were subsequently incorporated into the [ILO’s Labour Statistics Convention, 1985 \(No. 160\) \(http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312305\)](http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312305).

In its manual [Surveys of Economically Active Population, Employment, Unemployment and Underemployment \(1990\) \(http://www.ilo.org/public/english/bureau/stat/download/lfs.pdf\)](http://www.ilo.org/public/english/bureau/stat/download/lfs.pdf), the ILO discusses the concepts and definitions underlying these standards and provides technical guidelines for how to apply them to the collection of data through household surveys. The ILO article ‘Measurement of

employment, unemployment and underemployment – Current international standards and issues in their application (2007)' provides a summary update of changes in the concepts and definitions.

Institutional units

An institutional unit is defined as:

"4.2 ...an economic entity that is capable, in its own right, of owning assets, incurring liabilities and engaging in economic activities and in transactions with other entities."

[United Nations System of National Accounts \(https://unstats.un.org/unsd/nationalaccount/sna2008.asp\) 2008](https://unstats.un.org/unsd/nationalaccount/sna2008.asp)

Institutional units can take a variety of forms, each of which operates with different objectives and behaviours. The SNA describes two types of institutional unit, being 'households' and 'legal or social entities.' It also describes the 'enterprise', being a view of an institutional unit as a productive unit.

The enterprise is the primary unit of the ASNA.

For more detail on the definition of institutions, see chapter 4 of [Australian System of National Accounts, Concepts, Sources and Methods \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/5216.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/5216.0).

Households

Households, which are providers of labour services, are defined as groups of persons who share the same living accommodation, who pool some, or all of their income and wealth, and who consume certain types of goods and services collectively, mainly housing and food¹. Households are primarily consumer units, although they may also engage in production and accumulation.

Legal or social entities

Legal or social entities, which create jobs and therefore generate demand for labour services, are defined as institutional units whose existence is, either legally or by society, recognised independently of the persons or entities that may own or control them².

Legal or social entities include several forms of institutional units, such as 'corporations', 'non-profit institutions', and 'government units'.

Corporations

Corporations produce goods and services for sale on the market, usually as a source of profit for their owners. They may not, however, undertake final consumption.

Non-profit institutions

Non-profit institutions (NPIs) produce or distribute goods and services, but not for the purpose of generating income or profits. They are diverse in nature, with some behaving like corporations, some effectively part of general government, and some undertaking activities similar to general government but independent of it.

Government units

Government units organise and finance the provision of goods and services to individual households and the community at large, mainly financed from taxation revenue. They are also concerned with the distribution and redistribution of income and wealth, in accordance with government policies. They undertake production and final consumption on behalf of the population.

Enterprise

An enterprise is a view of an institutional unit as a producer of goods and services. Most enterprises consist of individual legal or social entities, or in some instances, combinations of unincorporated legal or social entities. A household can constitute an unincorporated enterprise with respect to its production of goods and services.

In the ASNA, the primary unit is the enterprise, which is part of the ABS Economic Units Model. Within the Economic Units Model, enterprises are grouped into institutional sectors and subsectors based upon their economic objectives, functions and behaviour. An enterprise can be a single legal entity, or a group of related legal entities which belong to the same institutional subsector. The Economic Units Model structures the often complex and unique relationships between businesses and parts of businesses into a framework that facilitates the compilation of meaningful statistics.

Institutional sectors

Corporations, non-profit institutions, government units and households are intrinsically different from each other in their economic objectives, functions and behaviour. The institutional sectors of the SNA group together similar kinds of institutional units according to the nature of the economic role they perform³. SNA defines the following institutional sectors⁴:

- Financial Corporations;
- Non-financial Corporations;
- General government;
- Non-profit institutions serving households;
- Households; and
- Rest of the World.

The Standard Economic Sector Classifications of Australia (SESCA) (cat. no. 1218.0) is based upon international standards and contains a variety of classifications, including institutional sectors as laid out in the SNA. Within SESA, the Standard Institutional Sector Classification of Australia (SISCA) describes these sectors. Within SISCA, sectors can be further divided into a range of subsectors, which more accurately describe the activities of the institutional units within them.

Sectors can also be divided more simply into public and private, where the former includes all government units and units controlled by government, and the latter includes all other units. This breakdown is often used in the classification and dissemination of statistics from ABS business surveys.

The ASNA utilises a combination of SISCA subsectors and public/private distinctions to assign institutions to ASNA institutional subsectors. These ASNA subsectors are the level at which legal entities may be grouped into enterprises in the ABS Economic Units Model.

ABS Economic Units Model

For the compilation of statistics, the ABS has developed an Economic Units Model to further describe and categorise enterprises and their components. The Units Model is a tiered structure, containing four levels, namely the enterprise group, the legal entity, the type of activity unit, and the location unit. Most businesses are simple in structure and are considered to have only a single level (at all four levels, the business is identical), while some businesses are complex in structure and may be classified by all four levels of the Units Model.

Enterprise Groups

The Enterprise Group (EG) is an institutional unit which contains one or more legal entities under common control and covers all of their collective activities in Australia. An EG can contain one or many legal entities and be divided into one or multiple Type of Activity Units or location units.

Legal Entities

The Legal Entity (LE) is an institutional unit which covers all activities in Australia of a single entity which possesses some or all of the rights and obligations of individual persons or corporations, or which behaves as such in respect of those matters of concern for economic statistics. In most cases the LE is equivalent to a single Australian Business Number (ABN) registration. LEs approximate the SNA concept of legal or social entities, but the concept is extended to include households engaged in productive economic activity.

Type of Activity Units

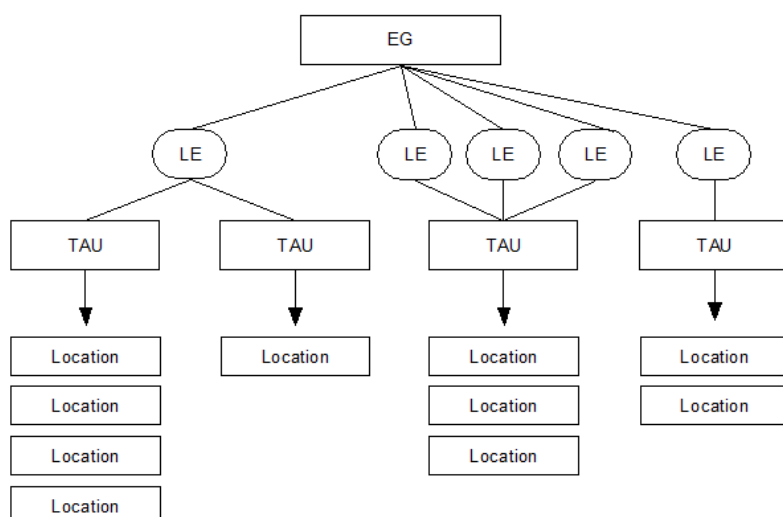
The Type of Activity Unit (TAU) is a producing unit comprised of one or more LEs, sub-entities or branches of a LE that can report productive and employment activities, and are homogeneous in their activity. TAUs operate within a single EG, and within a single industry subdivision in the Australian and New Zealand Standard Industrial Classification (ANZSIC).

Location Units

The Location Unit is comprised of a single, unbroken physical area from which an organisation is engaged in productive activity on a relatively permanent basis, or at which the organisation is undertaking capital expenditure with the intention of commencing productive activity on a relatively permanent basis at some time in the future.

The diagram below illustrates the nature of the relationships between the different units within the model.

ABS Economic Units Model



For the compilation of statistics, the ABS has developed an Economics Units Model to further describe and categorise enterprises and their components. The Units Model is a tiered structure, containing four levels: Enterprise Group which is an institutional unit which contains one or more legal entities under common control and covers all of their collective activities in Australia; Legal Entities: Is an institutional unit which covers all activities in Australia of a single entity which possesses some or all of the rights and obligations of individual persons or corporations, or which behaves as such in respect of those matters of concern for economic units. In most case the LE is equivalent to a single Australian Business Number (ABN) registration; Type of Activity Units: Is a producing unit comprised of one or more legal entities that can report productive and employment activities, and are homogenous in their activity; and Location Units: The Location Unit is comprised of a single, unbroken physical area from which an organisation is engaged in productive activity on a relatively permanent basis.

Economically active population

The economically active population comprises all persons who, during a specific period, furnished the supply of labour for the production of economic goods and services.

International Labour Organization, 13th ICLS, 1982

Understanding the economically active population is critical to interpreting statistics on labour supply and demand. The following section discusses the concept of economic activity, and defines the scope of the economically active population.

Scope of economic activity and the SNA production boundary

The concept of economic activity underlies measurement of the economically active population. The basis of this concept is found in the SNA concepts of 'production' and 'economic activity'. Production is broadly defined as all activities within the SNA 'general production boundary'.

Within this boundary are all physical processes, under the control and responsibility of institutional units, by which labour and assets are used to transform inputs of goods and services into outputs of other goods and services. Within the SNA, a more restrictive production boundary also exists, known as the 'SNA production boundary', which separates economic activity from other production.

The SNA production boundary is a subset of the SNA general production boundary, allowing a distinction between economic activity and other production activities. Activities falling within the constraints of the SNA production boundary are considered to be economic activity, while those outside of it are not economic activity (regardless of whether they are within the SNA general production boundary or not). Activities within the SNA production boundary include all market and non-market production, and certain types of production for own final use.

Market production

Market production is considered in scope of the production boundary. Market production is the production of goods and services for sale on the market, at prices which are economically significant. Prices are said to be economically significant when they have a significant influence on the amounts the producers are willing to supply, and on the amounts purchasers wish to buy. Market production also extends to goods and services bartered; those used as payments in kind; those transferred within the same enterprise to be used as intermediate inputs into production over which the original producer has no responsibility; or changes in inventories of finished or in-progress goods, intended for one of the above purposes.

The activities of workers employed in factories, business enterprises, farms, shops, service undertakings, household enterprises and other economic units engaged in the production of goods and services intended for sale on the market are considered to be part of market production⁵.

Non-market production

Non-market production is considered in scope of the production boundary. Non-market production is the production of goods and individual or collective services produced either by non-profit institutions serving households or government entities that are supplied free or at prices which are not economically significant. Prices are said to be not economically significant when they have little or no influence on how much the producer is prepared to supply, and are expected to have only a marginal influence on the quantities demanded.

Among the most prevalent forms of non-market production are the provision of education and health care to the general public. The activities of employees of government and other social and cultural institutions producing these goods and services are considered to be non-market production⁶.

Production for own final use

Production for own final use can be subdivided into two groups based, roughly, on the divide between goods and services. The production of goods for own final use is included within the SNA production boundary, while the production of domestic and personal services for own final use is mostly excluded.

Production of goods for own final use

The production of goods for own final use is considered in scope of the production boundary. Production of goods for own final use includes the production and processing of primary produce by households for their own final consumption, the construction of dwellings and structures for own use, and the production of fixed assets⁷ for own use.

The production of goods is included as, although the output is intended for own use, the producer theoretically has the option of selling the goods on the market after they have been produced (e.g. if a household constructs a dwelling, the dwelling can then either be lived in or sold on the market). This production closely resembles market production, and could become market production if the choice was made to sell rather than consume the output⁸.

Production of domestic and personal services for own final use

The production of domestic and personal services for own final use is typically not considered in scope of the production boundary, however several exceptions exist.

The production of domestic and personal services is the production of services for consumption within the same household, such as the cleaning and repair of dwellings and household durables, goods and vehicles; the preparing of meals; caring for children or the sick; and the transportation of household members.

The decision to consume these services within the household is made even before the service is provided and, in contrast to the production of goods for own final use, the household cannot theoretically choose to sell the service after it has been produced (e.g. if a member of the household cleans a room or repairs a car, the cleaning or repair service cannot then be sold to another after it has been performed)⁹.

Although the production of household domestic and personal services is productive in an economic sense, they are excluded from the national accounts for practical reasons. From an SNA perspective, household services have little relevance for the analysis of inflation or deflation or other fluctuations within the economy, as they can't be sold and wouldn't have a price. Without substantial changes to the measurement of production, their inclusion could obscure what is happening on markets and reduce the analytic usefulness of national accounts data.

The SNA provides a number of justifications for this exclusion¹⁰, summarised as follows:

"6.30...the relative isolation and independence of these activities from markets, the extreme difficulty of making economically meaningful estimates of their values, and the adverse effects it would have on the usefulness of the accounts for policy purposes and the analysis of markets and market disequilibria."

[United Nations System of National Accounts \(https://unstats.un.org/unsd/nationalaccount/sna2008.asp\) 2008](https://unstats.un.org/unsd/nationalaccount/sna2008.asp)

Domestic and personal services are also excluded from labour statistics because, without substantial revision to the way labour statistics are compiled, their inclusion would adversely affect the compilation of labour statistics that are relevant and useful in economic analysis. Using the current framework for labour statistics, which is linked to the SNA production boundary, the extension of the boundary to include the production of personal and domestic services by members of households for their own final consumption would result in all persons engaged in such activities becoming both economically active and self-employed. This would result in virtually the whole adult population being defined as 'economically active' and make unemployment virtually impossible by definition¹¹.

The production of housing services for own consumption by owner-occupiers is included in the SNA production boundary to account for large differences in rates of home ownership across countries. The production of own-account housing services has always been included in the SNA production boundary, and its exclusion would limit the comparability of the data both internationally and inter-temporally.

The paid employment of external staff to produce domestic and personal services for final consumption in the household is included in

the SNA production boundary. The production of domestic and personal services by employing paid staff is considered market activity¹².

With the exception of own-account housing services and the paid employment of domestic staff, the production of domestic and personal services for own final use is not within the SNA production boundary, and therefore is not considered to be economic activity.

Unpaid work and volunteer services

Volunteers are people who willingly give unpaid help, in the form of time, service or skills, to an organisation or group. Included in this category are the volunteer component of boards of management, fundraising committee members and auxiliary members.

[Australian National Accounts: Non-Profit Institutions Satellite Account \(cat. no. 5256.0\) \(https://www.abs.gov.au/statistics/economy/national-accounts/australian-national-accounts-non-profit-institutions-satellite-accounts/latest-release\)](https://www.abs.gov.au/statistics/economy/national-accounts/australian-national-accounts-non-profit-institutions-satellite-accounts/latest-release)

Unpaid work and volunteer services are generally in scope of the SNA production boundary, however they are generally not considered in scope of the Australian production boundary in the ASNA and labour household surveys.

A distinction can be made between those who have an agreement to provide labour for token remuneration or only income in kind, those for whom there is explicitly no remuneration, and those where there is apparently no remuneration but the workers benefit directly from the output to which they contribute. In ILO statistics, all three types of worker may be included in the economically active population as employees.

In the SNA, persons working for token amounts or only income in kind are considered to be economically active if the unit employing these staff is responsible for whatever little remuneration is received. For example, if doctors or teachers work for only food and lodging, the value of this as income in kind is the only remuneration imputed to them, and they are considered within the SNA production boundary. Such instances may arise in religious institutions or in the wake of natural disasters.

If staff are purely voluntary, with no remuneration at all, not even in kind, but are working in a recognised institutional unit (business, government agency, not-for-profit organisation) engaged in economic activity, then these individuals are still regarded as being economically active in the SNA. Individuals providing services to groups of other individuals, such as coaching a children's sports team, without any associated infrastructure, are not regarded as being economically active but rather engaging in a leisure pursuit¹³.

Although unpaid volunteers and volunteer services may fall within scope of the SNA production boundary, they are excluded from the ASNA and therefore, with the exception of contributing family workers, from Australian labour statistics. Persons working for token amounts or payment in kind are included in the ASNA and therefore in Australian labour statistics.

Contributing family workers

If family members contribute to the output of an unincorporated enterprise, they are assumed to receive an element of remuneration in kind, and as such are treated as being in the economically active population¹⁴. As such, Australian labour statistics include estimates for contributing family workers, even though other unpaid work is excluded.

Illegal activities

The SNA states that illegal production should be included within the production boundary, providing a production process exists and the outputs have market demand.

The SNA classifies illegal production within two categories:

- The production of goods or services whose sale, distribution or possession is forbidden by law; and
- Production activities that are usually legal, but become illegal when carried out by unauthorised producers; for example, unlicensed medical practitioners.

The treatment of illegal activities within the SNA is based upon whether the action is considered to be a 'transaction' or an 'externality'. Transactions are actions (regardless of their legality) in which two units enter by mutual agreement, such as buying and selling goods or services. Externalities, however, are actions carried out by one unit which change the condition or circumstances of other units without their consent, such as theft, violence, pollution, or other unsolicited service or disservice.

Illegal actions that fit the characteristics of transactions are treated in the same way as legal actions within the SNA production boundary. Thus, a variety of illegal work is considered to be economic activity. This includes, but is not limited to:

- the production of illegal goods such as narcotics;
- the sale of stolen goods;
- working without authority (e.g. selling merchandise without a licence, working in the construction industry without a permit, or a foreign citizen working without an appropriate visa); or
- working off-the-book for tax evasion purposes or for fear of losing entitlements, or because the employer wants to avoid their obligations (e.g. superannuation payments, taxation, or other labour legislation requirements).

Illegal actions that fit the characteristics of externalities are not considered to be economic activity. Thus, thefts of goods from persons or

households and other illegal activities which do not resemble transactions are not considered economic activity.

Illegal activity may involve both transactions and externalities. In such cases, these actions are considered separately, such that an action which is a transaction may be considered economic activity but one that is an externality is not. For example, theft is an externality and is not economic activity; however, the sale of those stolen goods is a transaction and may be considered economic activity.

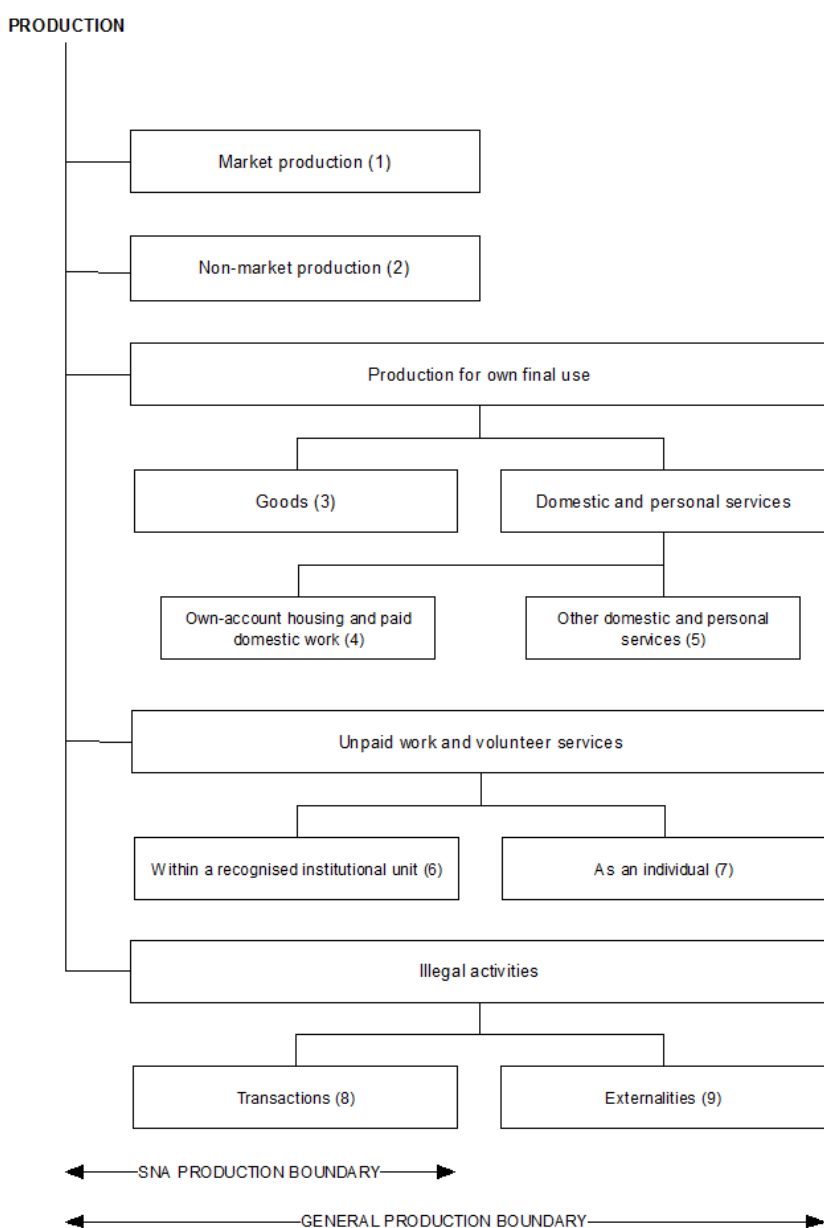
Due to the difficulty in identifying and valuing illegal transactions, no explicit estimates for such activities are made in the Australian System of National Accounts and Australian labour statistics for the production of illegal goods, such as narcotics or for stolen goods. However, some illegal transactions are likely to be included if they are reported as part of legal activities or as income for taxation purposes, such as prostitution and illegal workers. As a result, their effects on employment and unemployment statistics are difficult to assess.

For more information refer to [Information Paper: The Non-Observed Economy and Australia's GDP, 2012 \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5204.0.55.008Main+Features12012?OpenDocument\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5204.0.55.008Main+Features12012?OpenDocument).

Determining the Production Boundaries in the SNA and the ASNA

The diagram below summarises the preceding information, and shows how the SNA general and production boundaries are constructed.

The Production Boundaries in the SNA



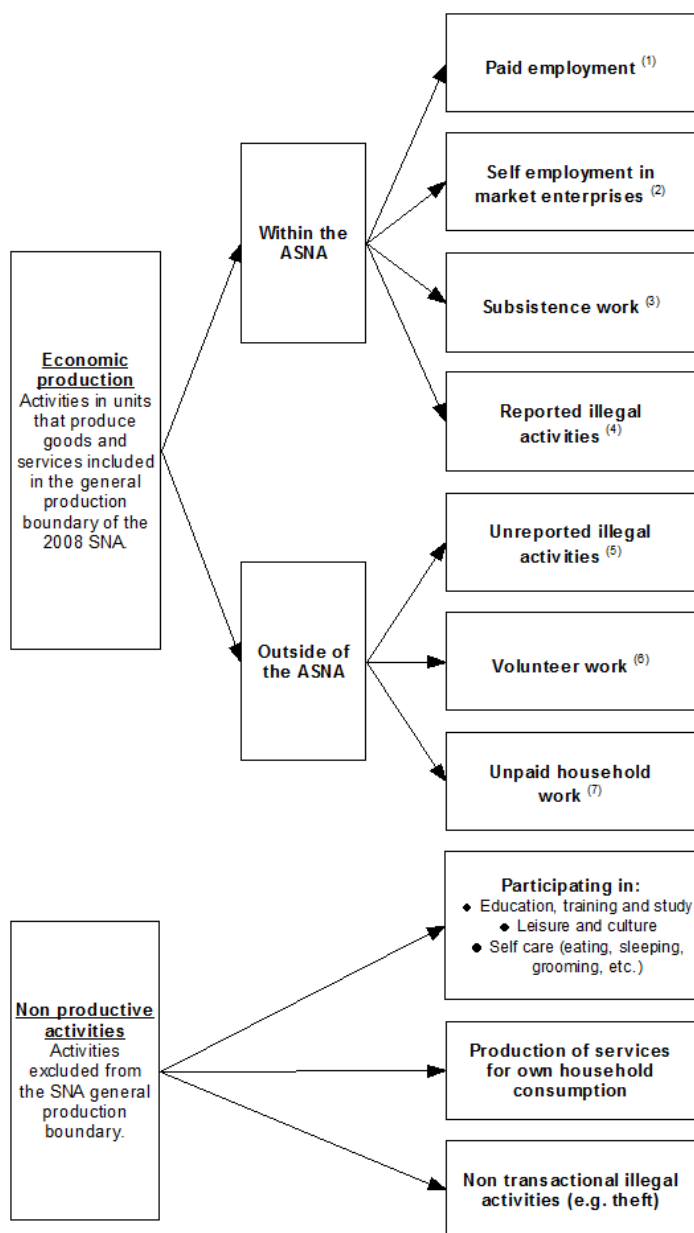
Outlines the production boundaries within the System of National Accounts. Production is broadly defined as all activities within the System of National Accounts (SNA) 'general production boundary'. Within the SNA, a more restrictive production boundary also exists, known as the 'SNA production boundary', which separates economic activity from other production. This allows a distinction between economic activity and other production activities. Activities falling within the constraints of the SNA production boundary are considered to be economic activity, while those outside of it are not economic activity. Activities within the SNA production boundary include all market and non-market

production, and certain types of production for own final use.

1. Production of goods and services normally intended for sale on the market.
2. Production of other goods and services, such as government activities.
3. Production and processing of primary products, construction of dwellings, and production of fixed assets.
4. Value gained from owning own home, and hiring a person external to the household to provide domestic and personal services to the household in exchange for remuneration.
5. Cleaning and repair of dwellings and household items, preparation of food, care for children or the sick, and transportation of household members.
6. Unpaid work within an institutional unit (e.g. working for an organised charity), work for token amounts or payment in kind received from an institutional unit (e.g. doctors or teachers working for food and lodging), and work of family members contributing to the output of an unincorporated family enterprise (e.g. children working in a family restaurant).
7. Unpaid work not within an institutional unit (e.g. charity work as an individual), work for token amounts of payment in kind not received from an institutional unit (e.g. a volunteer fed or housed by individuals), and the provision of services to groups of individuals (e.g. coaching children's sport) without any associated infrastructure.
8. Sale of stolen goods, production of illegal goods such as narcotics, illegal or unauthorised work (e.g. visitors working without an appropriate visa, working without appropriate permits, and work that is 'off the book').
9. Theft and violence.

The diagram below shows how the concept of economic activity is operationalised by the production boundary within the ASNA and Australian labour statistics.

The Production Boundaries in the ASNA



The production boundaries within the Australian System of National Accounts (ASNA). The ASNA production boundaries can be grouped as either economic production and non productive activities. Activities in economic production and included with the ASNA boundary include paid employment; self employment in market enterprises; subsistence work and reported illegal activities. Activities in economic production

and excluded from the ASNA boundary include unreported illegal activities; volunteer work; and unpaid household work. Non productive activities excluded from the SNA general boundary include: participating in education, training and study; leisure and culture; and self care (e.g. eating, sleeping); production of services for own household consumption; and non transactional illegal activities (e.g. theft).

1. Activities of all employees remunerated in cash or in kind, including domestic paid employment.
2. Activities of employers, own account workers, members of producers' cooperatives and contributing family workers in units producing goods or services for the market. All activities in this category occur in household unincorporated market enterprises. Some goods or services produced may be consumed by the household. Includes the production of goods or services that are exchanged for other goods or services (barter). Includes self-employed workers rendering paid/remunerated domestic services to households.
3. Self-employment work in own household or another household with family ties that produces goods mainly for own final use. Considered in employment if such production comprises an important contribution to the total consumption of the household. A household with family ties relates to a household of which at least one member belongs to the family of the worker.
4. Illegal activities, despite a likelihood of being under-reported, are included in the scope of economic production in the ASNA if they are reported by businesses. These activities involve transactions between two parties, for example payments to employees below minimum rates or activities conducted without necessary permits or licenses.
5. Unreported transactional illegal activities are outside the scope of production in the ASNA. These activities include, for example, supply and purchase of illegal goods.
6. Volunteer work is performed without pay to advance a cause or produce a benefit that primarily helps someone other than one's own household or family. Volunteer work may be carried out in units that produce goods or services. Such units may be market enterprises, non-market organisations or households with no family ties that produce for own final use.
7. Unpaid work for another household with family ties that produces services for own final use. The output of these services is consumed by the household to which the services are rendered. Household services may be paid or unpaid. When paid, the worker may be in paid employment or self-employment and is a person engaged in economic activity. When unpaid, the worker may provide the service to his or her own household or to another household with family ties (i.e., as an unpaid household service) or to another household with no family ties (i.e., as volunteer work in the production of services by households).

Scope of the economically active population

The economically active population is defined as all persons, within the population, who contribute to economic activity or are available to contribute to economic activity. The economically active population can be defined using the notion of time, such that a usually economically active population and a currently economically active population can be constructed.

The definition of the 'population' is therefore fundamental to the scope of the economically active population and must be clearly defined.

The notion of a 'population', from which the economically active population can be surveyed, is contingent on a variety of criteria. The two key criteria are those defining the economic territory, within which the population exists; and those defining residence, which enable the inclusion or exclusion of individuals, households, and institutions from that economic territory.

There are also other criteria applied for practical reasons and, as such, the survey population is usually not identical to the total resident population of the economic territory. The ILO manual '[Surveys of the Economically Active Population, Employment, Unemployment and Underemployment, 1990](http://www.ilo.org/public/libdoc/ilo/1990/90B09_344_engl.pdf)' (http://www.ilo.org/public/libdoc/ilo/1990/90B09_344_engl.pdf) highlights the need for these additional criteria:

"2.2 Surveys of the economically active population should, in principle, cover the entire population irrespective of activity status, sex, marital status, ethnic group, etc. In practice, however, certain restrictions may be necessary."

[International Labour Organisation \(http://www.ilo.org/public/libdoc/ilo/1990/90B09_344_engl.pdf\)](http://www.ilo.org/public/libdoc/ilo/1990/90B09_344_engl.pdf)

Additional criteria which define the economically active population are age limitations, which restrict measures of the economically active population to certain age ranges; and membership of the armed forces, which typically restrict measures of the economically active population to the civilian population.

The following section discusses these four key population criteria, as they apply to Australian labour statistics, as well as the definitions of current and usual economic activity and the relationship between economic activity and the labour force.

Economic territory

The production of meaningful statistics about the economically active population requires that the economic territory to which the population relates is accurately defined.

The concept of economic territory in the SNA is not identical to the concept of country. The most commonly used definition is a territory under the effective economic control of a single government, and as such usually approximates the geographic borders of a country.

In principal, the economic territory of Australia as defined in the ASNA¹⁵ includes the geographic territory under the effective control of the Australian government, including:

- any islands belonging to Australia which are subject to the same fiscal and monetary authorities as the mainland;
- the land area, airspace, territorial waters, and continental shelf lying in international waters over which Australia enjoys exclusive rights or over which it has, or claims to have, jurisdiction in respect of the right to fish or to exploit fuels or minerals below the sea bed; and
- territorial enclaves in the rest of the world (that is, geographic territories situated in the rest of the world and used, under international treaties or agreements, by general government agencies of the country). Territorial enclaves include embassies or consulates, military

bases, scientific stations, etc. It follows that the economic territory of Australia does not include the territorial enclaves used by foreign governments which are physically located within Australia's geographical boundaries.

Specifically, the economic territory of Australia consists of geographic Australia including Cocos (Keeling) Islands, Christmas Island, Norfolk Island, Jarvis Bay, Australian Antarctic Territory, Heard Island and McDonald Islands, Territory of Ashmore Reef and Cartier Island, and the Coral Sea Islands.

The Joint Petroleum Development Area (JPDA) is considered joint territory between Australia and East Timor.

Within the Australian labour household surveys context, a distinction must be made between: the territories which determine the estimated resident population of Australia; those which are covered by household survey collection procedures; and those used to benchmark or 'weight' household survey estimates (i.e., the population benchmarks).

- The "other territories" of Australia, namely Jervis Bay, Christmas Island, Cocos (Keeling) Island, and Norfolk Island after the 2016 Census, are included in the estimated resident population of Australia, but excluded from household survey collection procedures and population benchmarks.
- The "external territories" of Australia, namely Territory of Ashmore and Cartier Islands, Coral Sea Islands Territory, Australian Antarctic Territory, and Territory of Heard and McDonald Islands, are not included in the estimated resident population, household survey collection procedures or the population benchmarks.

Within the Australian labour business surveys context, no further geographical restrictions are imposed. Samples for business surveys are typically selected from the ABS Business Register, and therefore all businesses within the economic territory of Australia may be included, providing they meet other relevant scope restrictions.

This is further detailed within the relevant entry for each collection.

Residency

Within the SNA, residency is defined as the economic territory with which an institutional unit or individual has the strongest connection - in other words, its centre of predominant economic interest. Each institutional unit or individual is a resident of one and only one economic territory.

Actual or intended residence for one year or more is used as an operational definition in many countries (including Australia) to facilitate international comparability.

Residence of individuals and households

Persons are considered to have the strongest connection with the economic territory in which they physically reside. In the broadest sense, the total population consists of either all usual residents of the country (the usually resident or de jure population) or all persons present in the country (the de facto population) at a particular time.

Household surveys use the first population category, the usually resident population. All persons who are usually resident in Australia are considered part of the usually resident population, regardless of nationality, citizenship or legal status.

To determine whether a person is usually resident, Australia has adopted a 12 in 16 month rule. This rule specifies that, to be considered a usual resident, a person must have been (or expect to be) residing in Australia for 12 months or more in a 16 month period. This 12 month period does not need to be consecutive.

The application of the 12 in 16 month rule in the labour household survey context cannot be so precise. A screening question asks if the respondent is a short term resident and, if so, they are excluded from the survey. Labour household surveys also include residents who are temporarily overseas for less than six weeks. However, the 12 in 16 month rule is explicitly applied in the estimated resident population, and the population benchmarks used to weight the LFS.

For more information regarding the 12 in 16 month rule, refer to [Information Paper: Improved Methods for Estimating Net Overseas Migration, 2006 \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/3107.0.55.003\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/3107.0.55.003).

Residence of students

The residence of students is described as:

"26.83a ... People who go abroad for full-time study generally continue to be resident in the territory in which they were resident prior to studying abroad. This treatment is adopted even though their course of study may exceed a year. However, students become residents of the territory in which they are studying when they develop an intention to continue their presence in the territory of study after the completion of the studies."

[United Nations System of National Accounts \(https://unstats.un.org/unsd/nationalaccount/sna2008.asp\) 2008](https://unstats.un.org/unsd/nationalaccount/sna2008.asp)

Within the Australian labour household survey context, there is no special treatment for students and they are treated using the same 12 in 16 month rule. Within the Australian business survey context, there is no distinction made between students and other persons, such

that they are included if they are an employee, irrespective of their length of stay in the country.

Residence of enterprises

Within the labour business survey context, the de facto population is used, that is, all employees are included irrespective of their length of stay in the country. This is consistent with the SNA production boundary.

As a general principle, an enterprise is resident in an economic territory when it is engaged in a significant amount of production of goods or services from a location in the territory¹⁶.

An enterprise is resident in an economic territory when there exists, within the economic territory, some location, dwelling, place of production, or other premises on which or from which the unit engages and intends to continue engaging, either indefinitely or over a finite but long period of time, in economic activities and transactions on a significant scale. The location need not be fixed, so long as it remains within the economic territory¹⁷.

Corporations and non-profit institutions normally may be expected to have a centre of economic interest in the economy in which they are legally constituted and registered. Corporations may be resident in economies different from their shareholders, and subsidiaries may be resident in different economies from their parent corporations.

When a corporation, or unincorporated enterprise, maintains a branch, office, or production site in another territory to engage in a significant amount of production over a long period of time (usually one year or more) but without creating a corporation for the purpose, the branch, office, or site is considered to be a quasi-corporation (i.e., a separate institutional unit) resident in the territory in which it is located.

Within the Australian business survey context, residency is determined by deriving the sample selection of business frames from the Australian Business Register, which is an administrative data source maintained by the Australian Taxation Office (ATO). The registration of a business by the ATO is deemed to be a demonstration that the business has a centre of economic interest within Australia.

Age limits

The international standards and guidelines recognise the need to exclude persons below a certain age from measures of the economically population, without specifying a particular age limit. The responsibility for setting such limits lies with individual countries.

Examples of factors influencing the age limit are:

- legislation governing the minimum school leaving age;
- labour laws setting the minimum age for entering paid employment;
- the extent of the contribution to economic activity by young people; and
- the cost and feasibility of accurately measuring this contribution in household surveys.

Australian labour and compulsory schooling legislation have resulted in low numbers of young people being involved in economic activity. While such legislation varies from state to state, the net result is that age 15 is the lowest practical limit at which it is feasible, useful and cost-effective to measure the participation of young persons in economic activity with acceptable accuracy through household surveys. It should also be noted that this limit applies to all workers, including contributing family workers who perform unpaid work in a family business or farm.

As such, Australia has adopted a minimum age limit of 15 years and over in labour household surveys. While many household surveys do not use this age limit, estimates of economic activity are often made only for persons 15 years and over. Consistent with international guidelines, Australia does not apply a maximum age limit.

For more information regarding the significance of employment of those less than 15 years of age, refer to [Child Employment, Australia, Jun 2006 \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6211.0Main+Features1Jun%202006?OpenDocument\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6211.0Main+Features1Jun%202006?OpenDocument).

Labour business surveys collect information irrespective of the age of the employee, consistent with the SNA.

Members of the armed forces

The international standards require that members of the armed forces be classified as employed, and recommend that, for analytical purposes, the economically active population be divided into two parts: the armed forces and the economically active civilian population. The guidelines recognise that there may be difficulties in obtaining measures of the armed forces from labour household surveys due to scope restrictions, and that separate administrative counts may be necessary to supplement survey results to obtain statistics on total employment.

Within the Australian labour household surveys context, permanent members of the Australian Defence Force and members of non-Australian armed forces (and their dependants) are excluded.

The labour household surveys exclude permanent members of the Australian Defence Force because of practical collection difficulties. Where an estimate is required of the total economically active population, for example in international comparisons collated by the ILO,

survey estimates are supplemented by administrative counts of the defence forces.

Non-permanent members of the Australian Defence Forces (i.e. Australian Army Reserve, Airforce Reserve or Navy Reserve) are included in the labour household surveys. Their work within the defence force is considered as economic activity in the same way as any other work.

Current and usual economic activity

The international standards identify two measures of the economically active population:

- The currently active population, measured in relation to a short reference period such as one week or one day; and
- The usually active population, measured in relation to a long reference period such as one year.

The currently active population provides a snapshot of the economically active population at a particular point in time. This current stock measure of the labour supply, collected at sufficiently frequent intervals, can contribute to the formation of national accounts data (particularly relating to compensation of employees), and can also be used to monitor labour market trends in general (and employment and unemployment levels in particular).

The usually active framework was introduced as an international standard in 1982. It provides a framework for the collection of data reflecting the dominant pattern of activities over a lengthy period. The use of a long reference period can provide more representative estimates of the economically active population, particularly where economic activity has significant seasonal variation. Further, as it permits collection of information on not only the main activity of individuals over the year but also their other activities (e.g. spells of employment and unemployment), it is useful for analysis of employment and income.

As Australia publishes frequent measures with short reference periods, in most cases it is the currently active concept which is measured.

The economically active population and the labour force

The currently economically active population is conceptually equivalent to the labour force.

Because the concept of the economically active population includes both persons who contribute to economic activity and those who are available to contribute to economic activity, the current economically active population includes both employed persons and unemployed persons.

As most labour statistics reference a short reference period, the labour force is equivalent to the currently, rather than the usually, economically active population.

Footnotes

1. 2008 SNA, 4.4; ANSA, 1. 4.7
2. 2008 SNA, 4.6; ASNA, 4.10
3. 2008 SNA, 4.16-17
4. The same categories are followed in the ASNA, with the exception of the NPISH sector, which is instead combined with the household sector.
5. 2008 SNA 6.99
6. 2008 SNA 6.128
7. Fixed assets are defined in the SNA as produced assets that are used repeatedly, or continuously, in processes of production for more than one year (2008 SNA, 10.11)
8. 2008 SNA 6.114
9. 2008 SNA 1.42
10. For more detail, see 2008 SNA 1.41-2, 6.29-31
11. 2008 SNA, 1.42, 6.31
12. 2008 SNA 6.34 - 6.35
13. 2008 SNA, 19.37-39
14. 2008 SNA, 19.40
15. ASNA 4.38
16. 2008 SNA 26.4
17. BPM6 4.114

The labour force framework

Concepts and international guidelines

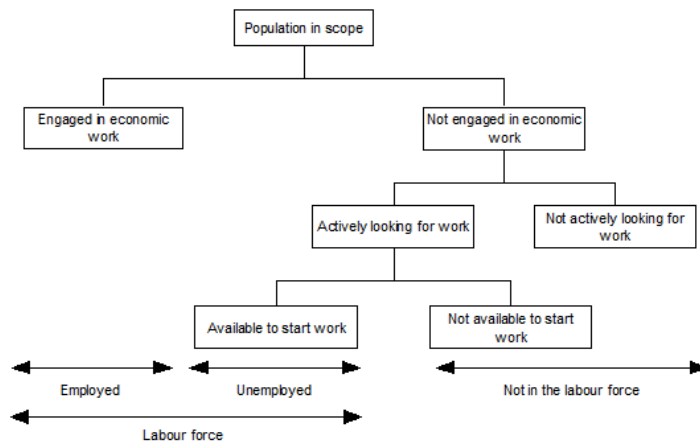
The currently economically active population is also referred to as the labour force. The labour force is conceptually equivalent to the labour supply available for the production of economic goods and services in a given short reference period. The labour force is the most widely used measure of the economically active population. The term 'labour force', as defined by the International Labour Organisation (ILO) in the international standards, is associated with a particular approach to the measurement of employment and unemployment. Essentially, this approach is the categorisation of persons according to their activities during a short reference period, using a specific set of priority rules.

The ABS labour force framework classifies a population, at a given point in time, into three mutually exclusive categories:

- Employed;
- Unemployed; and
- Not in the Labour Force (NILF).

Those persons contributing to economic activity are also known as employed persons, while those seeking to contribute to economic activity are also known as unemployed persons. The employed and unemployed categories together make up the labour force, which gives a measure of the number of persons contributing to, or actively looking and immediately available for, the supply of labour at that time. The third category (not in the labour force) represents the currently economically inactive population.

The Labour Force Framework



Outlines the labour force framework and classifies the in-scope population into three mutually exclusive categories: employed; unemployed and not in the labour force. The employed and unemployed categories together make up the labour force which gives a measure of the number of people contributing to, or actively looking and immediately available for, the supply of labour at that time. The third category of not in the labour force represents the currently inactive population.

The labour force framework includes detailed rules for sorting the population into its categories. These rules are applied in population surveys through three steps. The first involves identifying the in-scope population. The second involves identifying, within the in-scope population, those persons who were engaged in economic activity and who were either at work or temporarily absent from work. The third step involves identifying, among the remaining persons, those persons who were actively seeking and available for work, or who were not seeking work because they were waiting to commence a job that they had already found. The labour force framework classifies persons identified in the second step as employed, and those identified in the third step as unemployed. The residual in-scope population is classified as 'not in the labour force'.

The labour force framework rules have the following features:

- the activity principle, which is used to classify the population into one of the three basic categories in the labour force framework;
- a set of priority rules, which ensure that each person is classified into only one of the three basic categories; and
- a short reference period, to reflect the labour supply situation at a specified point in time.

The rationale for the treatment of people temporarily absent from work, and of people waiting to start a job they have already found, stems directly from the labour supply perspective, and is discussed further below (and in the Unemployment chapter).

Activity principle

The activity principle of the labour force framework requires that a person's labour force status is determined by what they were actually doing in the reference period, in terms of their engagement in, or capacity to engage in, economic activity. Commonly, surveys seek responses to a series of activity-based questions, which reflect both the reference period and the priority rules. The purpose of the activity principle is to provide an objective measure of the labour force.

Priority rules

Under the priority rules, precedence is given to employment over unemployment and to unemployment over economic inactivity. To ensure that all economic activity is covered, a practical minimum quantity of work is required (one hour or more in the short reference period); this also ensures that only those completely without work can be classified as unemployed. Of those completely without work, the unemployed must have taken active steps to obtain work and be currently available for work. The employed, the unemployed and the inactive are thus mutually exclusive and exhaustive components of the population.

Together, the priority rules and the activity principle provide unambiguous labour force measures, regardless of other activities that may be undertaken at the same time. For example, a person at work may also be actively seeking other employment; they are currently contributing to economic production and are therefore classed as employed, despite their job search. Similarly, a person working part-

time while undertaking full-time study will be classed as employed. Likewise, a full-time student who is not working and is actively seeking and available for work will be classed as unemployed.

Reference period

The concepts of employed and unemployed need to relate to short time periods to allow meaningful measures of current levels and changes in employment and unemployment. Two short reference periods are presented in the international standards as suitable for the purpose: one week; and one day. Since employment and unemployment are stock concepts, the statistical measures would ideally be of a precise point in time. However, the closest practical time-span that could represent a single point in time is one day or one week. The choice between a one week and a one day reference period is not a recent problem, but one that has been the subject of much consideration and debate by labour statisticians for over 50 years.

As a result of the application of the priority rule (under which economic activity, however little, has precedence over other non-economic activities), the labour force measured using a one week reference period must always be equal to or greater than the labour force measured using a single day of that reference week. The difference between the two measures depends on the relative number of persons who change their activity status during a week. The differences are likely to be fairly small, because, in the course of a week, the movement of persons from unemployed to employed, and from employed to unemployed, is more likely than persons changing their status from inside the labour force to outside the labour force.

The solution adopted in the international standards aims to satisfy different conditions which exist among countries. In countries such as Australia, where regular full-time employment is dominant, similar average results will arise from the use of a reference period of a week or a single day; however, the one week reference period is likely to provide results of lower variance and is therefore preferred. Conversely, where persons employed in casual, part-time, or temporary jobs constitute a significant proportion of total employment, the use of a one day reference period will provide a more precise measure of employment and unemployment than using a reference period of a week.

Application of the framework

In household surveys, labour force status is derived by asking a series of questions about a person's work-related activities and availability for work in the reference period.

The criteria for determining a person's labour force status are (broadly) as follows:

- whether a person has work (i.e. economic work, including production and processing of primary products for own consumption, own-account construction and other production of fixed assets for own use, but excluding activities such as unpaid domestic work and volunteer community services); and
- whether those who do not have work are:
 - actively looking for work; and
 - available to start work.

The determination of labour force status from these criteria is as follows:

- a person who meets the first criterion is classified as employed, and hence in the labour force (currently economically active);
- a person who meets all of the subsequent criteria (i.e. without work, actively looking for work, and available to start work) is classified as unemployed, and hence in the labour force (currently economically active); and
- a person not classified as employed or unemployed is classified as not in the labour force (not currently economically active).

Employed

Employed persons are defined as all persons aged 15 years and over who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind, in a job or business or on a farm (comprising employees and owner managers of incorporated or unincorporated enterprises); or
- worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers); or
- were employees who had a job but were not at work and were:
 - away from work for less than four weeks up to the end of the reference week, or
 - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four week period to the end of the reference week, or
 - away from work as a standard work or shift arrangement, or
 - on strike or locked out, or
 - on workers' compensation and expected to be returning to their job; or
- were owner managers, who had a job, business or farm, but were not at work.

Unemployed

Unemployed persons are defined as persons aged 15 years and over who were not employed during the reference week, and:

- had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week and were available for work in the reference week; or
- were waiting to start a new job within four weeks from the end of the reference week and could have started in the reference week if

the job had been available then.

Persons Not In the Labour Force (NILF)

Persons not in the labour force are defined as persons aged 15 years and over who were neither employed nor unemployed. They include persons who are:

- retired or voluntarily economically inactive;
- performing home duties or caring for children;
- attending an educational institution;
- experiencing a long-term health condition or disability;
- experiencing a short-term illness or injury;
- looking after an ill or disabled person;
- undertaking travel or a leisure activity;
- working in an unpaid voluntary job;
- in institutions (hospitals, gaols, sanatoriums, etc.);
- permanently unable to work; and
- members of contemplative religious orders.

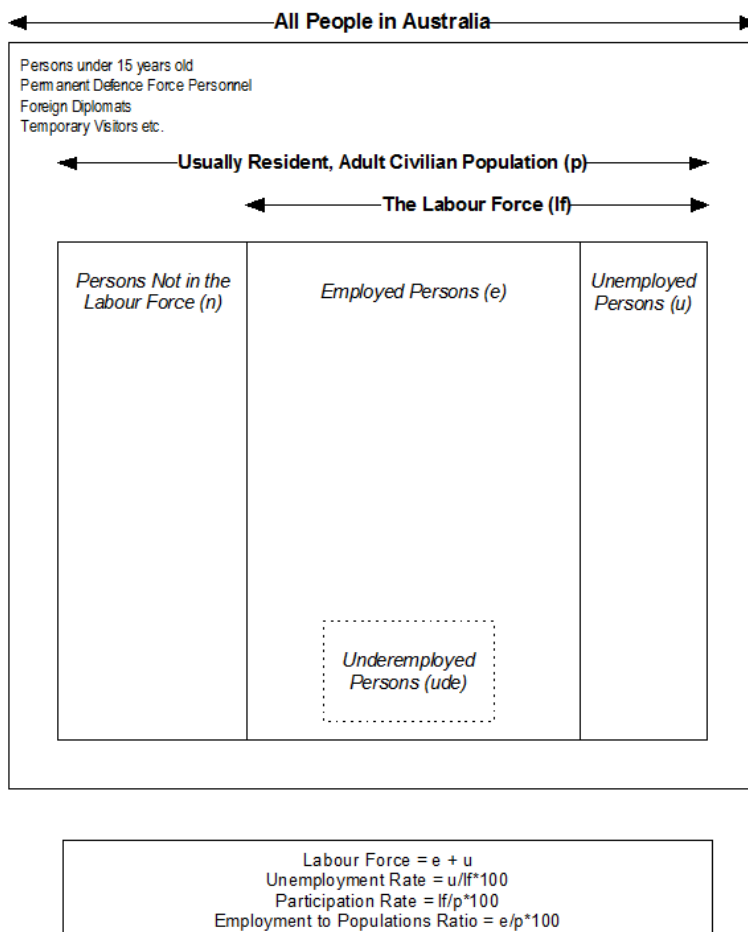
Statistical measures

The ABS produces a number of statistics to summarise the state of the labour market in relation to the number of people in Australia who are either:

- employed,
- unemployed, or
- not in the labour force.

The diagram below depicts how the labour force framework is applied to all persons in Australia.

How the Labour Force Framework Applies to All People in Australia



Outlines how the Labour Force Framework is applied to all people within Australia. The ABS produces a number of statistics to summarise the state of the labour market in relation to the number of people in Australia who are either employed; unemployed; or not in the labour force. These can be further identified in the Labour Force Framework as the labour force being made up of all employed and unemployed persons. The usually resident, adult civilian population, often referred to as 'the civilian population', which is made up of the labour force and all persons not in the labour force. Lastly, the underutilised population which is made up of all persons who are unemployed and all employed

persons who want to and are available to work more hours, known as the underemployed.

Basic labour force formulae

The labour force can be described and examined using a range of simple formulae. These provide both total numbers for various categories, as well as rates and ratios which serve as analytical tools for interpreting the data.

The Labour Force Survey publishes labour force participation rates and other population ratios on a regular basis. For more information on the contents and methodology of this survey, refer to the Labour Force Survey section of this publication.

Labour force categories

The labour force (lf) is made up of all employed and unemployed persons.

$$\text{labour force (lf)} = \text{employed persons (e)} + \text{unemployed persons (u)}$$

The usually resident, adult civilian population (p), often simply referred to as 'the population' or 'the civilian population', is made up of the labour force and all persons not in the labour force.

$$\text{civilian population (p)} = \text{lf} + \text{persons not in the labour force (n)}$$

The underutilised population is made up all persons who are unemployed and all employed persons who want to and are available to work more hours, known as the underemployed.

$$\text{underutilised persons} = u + \text{underemployed persons (ude)}$$

Rates and ratios

Various rates and ratios are used extensively in analyses of labour statistics, in particular to monitor changes in the size and composition of the supply of labour. These include the unemployment rate, the labour force participation rate, the underemployment rate and ratio, the underutilisation rate, and several population ratios. Although the names of these relative measures often include 'rate' or 'ratio', they are typically published by the ABS as a percentage.

The unemployment rate shows the percentage of the labour force which is unemployed, relative to those in the labour force.

$$\text{unemployment rate} = \frac{u}{lf} \times 100$$

The labour force participation rate shows the proportion of the in-scope population which is in the labour force, relative to those who are not in the labour force.

$$\text{labour force participation rate} = \frac{lf}{p} \times 100$$

The underemployment rate and ratio are supplementary measures of underutilised labour capacity. Underemployed persons can be expressed either as a percentage of employed persons (underemployment ratio) or as a percentage of the total labour force (the underemployment rate).

$$\text{underemployment ratio} = \frac{ude}{e} \times 100$$

$$\text{underemployment rate} = \frac{ude}{lf} \times 100$$

The labour force underutilisation rate combines the unemployment and underemployment rates to show the proportion of the population who are looking for work, either as unemployed or as underemployed, expressed as a percentage of the total labour force.

$$\text{underutilisation rate} = \frac{u + ude}{lf} \times 100$$

Population ratios provide information on the percentage of persons in a population with certain characteristics. The employment to population ratio shows the proportion of the total population who are employed, relative to those who are unemployed or not in the labour force.

$$\text{employment to population ratio} = \frac{e}{p} \times 100$$

Relative frequencies can also be calculated for specific subgroups within the population with specific characteristics, such as a certain age group. These frequencies are typically calculated by applying the characteristics to both the numerator and denominator, such that they represent the frequency of a smaller group with specific characteristics relative to a larger group with those same characteristics. Examples are the employment to working age population ratio, and the youth unemployment rate.

The employment to working age population ratio is derived from the employment to population ratio, but restricted to include only persons below the retirement age, currently 65. It shows the ratio of employed persons aged 15-64 years $\frac{e^{15-64}}{p^{15-64}}$, relative to all persons aged 15-64 years $\frac{e^{15-64}}{p^{15-64}}$. The rationale is that this measure is less impacted over time by changing demographic structures than the employment to population ratio. It is, however, important to note that, since people do continue to work past the official

retirement age or return to work after retirement, this measure does not capture the full scope of employment.

$$\text{employment to working age population ratio} = \frac{e^{15-64}}{p^{15-64}} \times 100$$

The youth unemployment rate facilitates the specific analysis of youth unemployment. It shows the proportion of persons aged 15-24 years who are unemployed $\left(\frac{u^{15-24}}{lf^{15-24}}\right)$, relative to all persons aged 15-24 in the labour force $\left(lf^{15-24}\right)$.

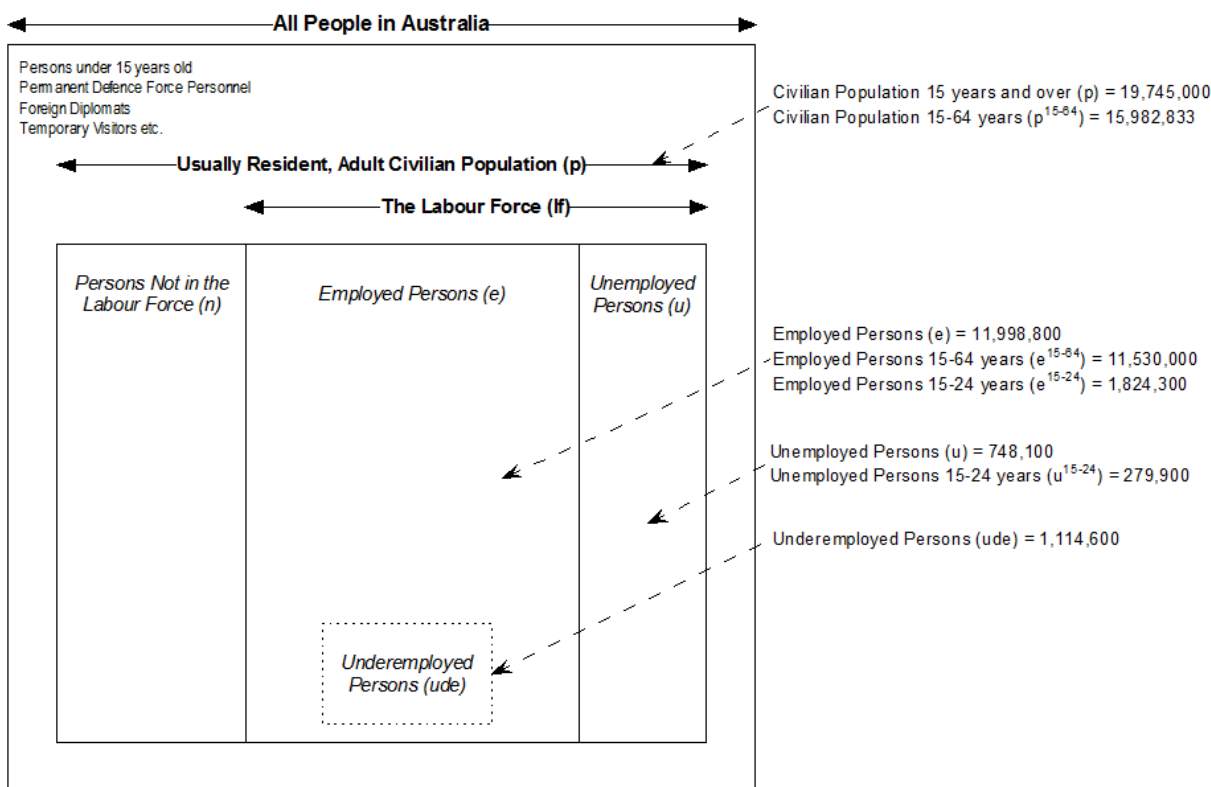
$$\text{youth unemployment rate} = \frac{u^{15-24}}{lf^{15-24}} \times 100$$

Example: solving the formulas

The following example details how some of these formulae are calculated using example data from the Labour Force Survey.

- Civilian population 15 years and over = 19,745,000
- Civilian population aged 15-64 years = 15,982,833
- Employed persons = 11,998,800
- Employed persons aged 15-64 years = 11,530,000
- Employed persons aged 15-24 years = 1,824,300
- Unemployed persons = 748,100
- Unemployed persons aged 15-24 years = 279,900
- Underemployed persons = 1,114,600

Solving the formulas



The ABS Labour Force Framework including data for each of the groups allowing for the calculation of various labour market items. Examples include the labour force participation rate, unemployment rate and underemployment rate.

Using the data above, the employment to population ratio is calculated as:

$$\text{employment to population ratio} = \frac{e}{p} \times 100 = \frac{11,998,800}{19,745,000} \times 100 = 60.8\%$$

One might then want to know how much of the total population is in the labour force (the labour force participation rate), or how much of the labour force is unemployed (the unemployment rate). To do this, however, one would need to first work out the size of the labour force, which is made up of the employed and the unemployed.

$$\text{labour force} = e + u = 11,998,800 + 748,100 = 12,746,900$$

It is then possible to calculate the labour force participation rate and the unemployment rate.

$$\text{labour force participation rate} = \frac{lf}{p} \times 100 = \frac{12,746,900}{19,745,000} \times 100$$

$$\{19,745,000\} \times 100 \text{ \& } = 64.6\% \end{aligned} \backslash \backslash$$

$$\backslash \backslash \begin{aligned} \text{unemployment \ rate \& } = \frac{u}{l} \times 100 \text{ \& } = \frac{748,100}{12,746,900} \times 100 \text{ \& } = 5.9\% \end{aligned} \backslash \backslash$$

One might then want to examine the prevalence of underemployment, both among employed people and within the entire labour force. For this, one would turn to the underemployment ratio and the underemployment rate.

$$\backslash \backslash \begin{aligned} \text{u n d e r e m p l o y m e n t \sim r a t i o \& } = \frac{u \text{ d e }}{e} \times 100 \text{ \& } = \frac{1,114,600}{11,998,800} \times 100 \text{ \& } = 9.3\% \end{aligned} \backslash \backslash$$

$$\backslash \backslash \begin{aligned} \text{underemployment \ rate \& } = \frac{u \text{ d e }}{l \text{ f }} \times 100 \text{ \& } = \frac{1,114,600}{12,746,900} \times 100 \text{ \& } = 8.7\% \end{aligned} \backslash \backslash$$

Neither unemployment nor underemployment alone tells the whole picture of underutilised labour. As such, one would then want to know about the total amount of underutilisation in the labour force, and therefore would want to know the labour force underutilisation rate. Firstly, the number of underutilised persons, which is the sum of unemployed and underemployed, needs to be calculated.

$$\backslash \backslash \begin{aligned} \text{underutilised \ persons \& } = u + u \text{ d e } \text{ \& } = 748,100 + 1,114,600 \text{ \& } = 1,862,700 \end{aligned} \backslash \backslash$$

It is then possible to calculate the underutilisation rate.

$$\backslash \backslash \begin{aligned} \text{underutilisation \ rate \& } = \frac{u + u \text{ d e }}{l \text{ f }} \times 100 \text{ \& } = \frac{1,862,700}{12,746,900} \times 100 \text{ \& } = 14.6\% \end{aligned} \backslash \backslash$$

One might also be interested in looking specifically at unemployment among young people. To do this, one might decide to calculate a youth unemployment rate by restricting the labour force to only persons aged 15-24 years. The correct formula would divide unemployed persons aged 15-24 years $((u^{15-24}))$ by all persons in the labour force aged 15-24 years. The first step is to calculate the labour force aged 15-24 years, which is the sum of employed persons aged 15-24 years $((e^{15-24}))$ and unemployed persons aged 15-24 years.

$$\backslash \backslash \begin{aligned} \backslash \backslash \begin{array}{c} \text{labour \ force \ aged \ 15 \ to \ 24 \ years} \end{array} \text{ \& } = e^{15-24} + u^{15-24} \text{ \& } = 1,824,300 + 279,900 \text{ \& } = 2,104,200 \end{aligned} \backslash \backslash$$

It is then possible to calculate the youth unemployment rate.

$$\backslash \backslash \begin{aligned} \text{youth \ unemployment \ rate \& } = \frac{u^{15-24}}{l \text{ f }^{15-24}} \times 100 \text{ \& } = \frac{279,900}{2,104,200} \times 100 \text{ \& } = 13.3\% \end{aligned} \backslash \backslash$$

One might further consider the implications of the age distribution of the population and realise that some of the previous frequencies, such as the employment to population ratio, might be impacted by an ageing population and greater numbers of retired persons not in the labour force. Therefore, one might decide to calculate an employment to population ratio only for persons aged between 15 and the retirement age, currently 65. The correct formula would divide employed persons aged between 15 and 64 years $((e^{15-64}))$ by a civilian population restricted to those aged between 15 and 64 years $((p^{15-64}))$.

$$\backslash \backslash \begin{aligned} \backslash \backslash \begin{array}{c} \text{employment \ to \ working \ age \ population \ ratio} \end{array} \text{ \& } = \frac{e^{15-64}}{p^{15-64}} \times 100 \text{ \& } = \frac{11,530,000}{15,982,833} \times 100 \text{ \& } = 72.1\% \end{aligned} \backslash \backslash$$

Extensions to the framework

The basic framework, as outlined above, can be extended to identify various sub-groups within the labour force.

Employment types and arrangements

The arrangements of employment vary among employed persons. Persons may be employed as employees; however, they may also be an owner-manager of an enterprise, either incorporated or unincorporated, and either with or without employees. The ABS Status in Employment classification allows these groups to be separately identified within the labour force. Employees may also be broken down into groups based on the arrangements of their employment. Such breakdowns may be based on casual employment, contract work, labour hire employment, or even on job stability and flexibility measures.

Hours worked

Hours of work can be used to break down employment into smaller categories based upon either actual or usual hours worked, or the desired hours worked. Employed persons are classified as employed full-time if they worked 35 or more hours in the reference week, or worked less than 35 hours in the reference week but usually work 35 or more hours in a week. They are classified as part-time if they usually work less than 35 hours and did so in the reference week.

Labour participation potential: underemployment, marginal attachment, and discouraged jobseekers

Labour participation potential refers to potential labour which is not undertaken for a variety of reasons. It is a broader measure than

unemployment, as potential labour can exist also within both of the other labour force categories of employment and not in the labour force.

The ABS produces both headcount (number of persons) and volume (number of hours) measures of underutilisation. Within employment, underemployment refers to a situation where the supply of labour is greater than the demand, and therefore employed persons are working fewer hours than they would like to. It is possible to identify employees who are underemployed by asking whether they want to work more hours than they currently do. Underemployment is a distinct measure of labour force underutilisation; however, it can also be combined with unemployment to form a broader measure of total underutilised labour in the economy.

The underutilised population can be further extended by the addition of select groups of persons not in the labour force, known as the marginally attached. Marginal attachment refers to persons who are not currently in the labour force, but who want to work. They are divided into two categories: those actively looking for work but not available to start work in the reference week, and those not actively looking for work but available to start work within four weeks. Within the second category are discouraged jobseekers, who are persons not looking for work because they believe that they are unlikely to find a job for a variety of reasons.

Long-term unemployed job seekers

Within unemployment, it is possible to identify persons who are in long-term unemployment, defined as having duration of unemployment of 12 months or more. The number of unemployed people is an important social and economic indicator. The length of time that unemployed people have been looking for work or since they last worked (previously referred to as duration of unemployment) is also important from both an economic and social perspective. Long-term unemployment (i.e. where duration of job search is 52 weeks or more) is of particular social concern due to the consequences of being out of work for long periods, such as financial hardship and the loss of relevant skills. From an economic perspective, the longer people are unemployed the less likely they are going to be able to contribute to the economy.

Since its inception in 1960, the ABS Labour Force Survey (LFS) has collected information about duration of unemployment for unemployed persons. The survey collects data each month about the length, in completed weeks, of current (incomplete) spells of looking for work and/or time since last job from those who are currently unemployed.

The definition used by the ABS aligns with international standards (19th ICLS resolution (2013) concerning statistics of work, employment and labour underutilisation).

Labour force framework examples

The section below discusses the treatment in the Labour Force Survey of particular groups of persons as employed, unemployed or not in the labour force. These groups include: participants in labour market programs (such as the 'Work for the Dole', 'Community Development Employment Projects (CDEP)' and 'Structured Training and Employment Project (STEP)' schemes); students; contributing family workers; and future starters.

Participants in labour market programs

A wide range of labour market programs are provided by governments. These programs aim to: assist the efficient functioning of the labour market; help individuals and industry to improve the productivity and skills of the labour force; and improve the skills and employment prospects of persons disadvantaged in the labour market. Programs implemented by governments take various forms including wage subsidies to employers, vocational training, paid and unpaid work experience, and assistance in finding employment.

The Labour Force Survey does not ask any questions directly related to participation in labour market programs. Such information is neither necessary nor sufficient to determine labour force status. Individual participants are counted as employed, unemployed or not in the labour force according to economic (work-related) activity undertaken in the survey reference period. The labour force measure, based on economic activity tests, is thus consistent over time and independent of administrative changes to labour market programs or their eligibility rules.

Persons working for pay in a job for which their employer receives a government subsidy are 'working in a job' (employed), regardless of the subsidy (about which the person may have no knowledge).

The treatment of participants in programs involving training but no subsidy (paid either to employers or participants) depends on the individual circumstances of the participant. If the participant worked for pay in a job (or was temporarily away from work) during the reference week, they should be classified as employed. If they did no paid work (and were not temporarily away from work), they are classified as either unemployed or not in the labour force depending on whether they actively looked for, and were available to commence work, in the survey reference period.

Below are some common labour market programs, and how the participants of these programs are treated in the Labour Force Survey.

Work for the Dole

Work for the Dole is a government program aimed at providing work experience to improve the skills, and future (paid) employment

prospects, of persons registered for unemployment benefits. Under 'Work for the Dole' schemes, to maintain their eligibility for benefits, persons are required to undertake work-like activities at a host organisation (e.g. government agencies) or as part of a community-based project for a number of hours per week.

Superficially, such persons might be regarded as 'employed' as they are working for one hour or more and receive a payment. However, they are not paid for their work by the organisations undertaking the community projects. The participants are receiving only their unemployment benefit entitlement, paid directly by the administering government agency. As the community organisations do not have employer/employee relationships with the scheme participants, activity in a 'Work for the Dole' scheme is not considered to be engagement in an employee job.

Accordingly, the labour force status of persons participating in 'Work for the Dole' schemes is determined according to economic (work-related) activity undertaken in the survey reference period. They are classified either as unemployed or not in the labour force, depending on whether they actively looked for, and were available to commence work, in the survey reference period.

General job-search assistance programs

Various government programs have provided assistance to job-seekers. Interaction with these programs may constitute actively looking for work, and therefore impact on a person's labour force status.

Up to June 2014, as well as being registered with any other employment agency, being registered with Centrelink as a jobseeker was considered to be an active step. In July 2014, being registered with Centrelink was removed, while being registered with a Job Services Australia provider was added.

In July 2015, Job Services Australia was replaced by the "jobactive" program. As the names of employment programs may change in the future, the question wording was updated to remove any explicit references to agencies or programs and now refers to the generic "employment agency".

Programs in remote areas of Australia

Community Development Employment Projects (CDEP) was a scheme of the Australian Government which provided local employment opportunities for Aboriginal and Torres Strait Islander communities. Under the scheme, Indigenous communities and organisations could receive a grant, similar in value to the collective unemployment benefit entitlements of participating community members, to undertake a wide range of community development projects. Individuals could choose whether or not to participate in the scheme, by which they would forgo their unemployment benefits in exchange for paid employment. The work in which they might engage was determined by the community or organisation, and included activities such as housing repairs and maintenance, artefact production, road works, market gardening, fishing and other business and cultural activities.

Under the CDEP scheme, the community met all legal responsibilities to its workers, including the provision of award wages and conditions, workers' compensation insurance, and income tax liabilities. Accordingly, an employment relationship was deemed to have existed between the community (employer) and the members of the community undertaking work (employees). Participation in the scheme was considered to have been engagement in a paid employment job, and participants were classified as having been employed.

From July 2009 onwards, the CDEP scheme was discontinued in non-remote locations where the economy is well established. Individuals in these communities who were formerly paid wages under CDEP instead received alternative income support benefits.

Unless they had another form of paid employment, persons receiving income support benefits were not considered to have been employed. Instead, they were classified as unemployed or not in the labour force, depending on whether or not they were actively looking for, and were available to, work.

In remote communities, participants who joined CDEP prior to July 2009 continued receiving wages until June 2017, and continued to be classified as employed. New participants received income support benefits, and were treated as either unemployed or not in the labour force.

In July 2013, the Remote Jobs and Community Program (RJCP) replaced CDEP. Like CDEP, RJCP participants received income support payments, and were treated as either unemployed or not in the labour force.

On 1 July 2015, the Community Development Programme (CDP) replaced the RJCP. The CDP has two objectives: helping people find work, and allowing them to contribute to their communities and gain skills while looking for work. Under this program, job seekers with activity requirements are expected to do up to 25 hours per week of work-like activities. Activities can take different forms that are suited to the job seeker, their community and the local job market. Job seekers can undertake formal training (as an opportunity to gain qualifications), or foundation skills training (e.g. language, literacy, numeracy and driver training) as part of their activity requirements. Like RJCP, CDP participants receive income support payments, and are therefore classified as either unemployed or not in the labour force.

Students

Persons engaged in full-time or part-time study who satisfy the criteria for classification as employed are treated in the same way as any

other group. Their labour force status is determined according to economic (work-related) activity undertaken in the survey reference period. International students meeting these same requirements, including residency requirements, are similarly included.

Contributing family workers

Persons working without pay in an economic enterprise operated by a related person are called 'contributing family workers'. They are classified as 'employed' if they worked one hour or more in the reference week, and as 'unemployed' or 'not in the labour force' if they did not work during the reference week.

Although ILO guidelines indicate that an unpaid family worker is a person working without pay in an economic enterprise operated by a related person living in the same household, in Australia there is no requirement for the related person to be living in the same household.

Future starters

Future starters are those persons who were not employed during the reference week, were waiting to start a job within four weeks from the end of the reference week, and could have started in the reference week if the job had been available then. Future starters are classified in both international standards and in Australia's labour statistics as unemployed.

Under ILO guidelines, future starters do not have to be actively looking for work in order to be classified as unemployed. Until February 2004, the Labour Force Survey definition of unemployed only included the subset of future starters who had actively looked for work in the four weeks to the end of the reference week. Hence, the Labour Force Survey treatment of future starters was not fully consistent with the ILO standards, as the precondition of active job search was not waived meaning some future starters were defined as 'not in the labour force'. From February 2004, future starters who had not actively looked for work are classified as unemployed in the Labour Force Survey, in line with ILO guidelines. Labour Force Survey estimates were revised back to April 2001 to reflect this change. This revision created a small trend break at April 2001 in unemployed persons and unemployment rate series.

Hours worked and the one hour criterion

Employment is determined using a minimum amount of work within a specific period. Guided by international standards, it is usually set at one hour, either per day or per week.

The ABS has always used a one hour per week criterion. The ABS uses this criterion for several reasons:

- It equally covers the various types of employment; including full-time work, part-time work, shift work, casual work, on-call work and other irregular employment which may be missed should a higher threshold be set.
- By classifying a person working even for only one hour as employed, it maintains the priority rules discussed above, ensuring that employment always takes precedence over other activities, regardless of the amount of time devoted to it.
- As the definitions of employment and unemployment are interrelated, it allows unemployment to be defined as a total lack of work.
- It allows employment to be used alongside hours worked as a complete measurement of labour input for productivity analysis.

It is important to understand that 'employed' is a binary category: a person is either employed or not employed (with the latter separated into either unemployed or not in the labour force). The employment classification does not take into account whether the employment is satisfactory for the employed person, or sufficient to live on. The ABS publishes additional information on the characteristics of employment, including number of hours worked and remuneration received which, when analysed in the light of other labour, economic, and social data (e.g. purchasing power, measured in the Consumer Price Index), provides more detail about the quality and sufficiency of employment.

The number of hours worked by employed persons is a statistic collected for a number of reasons. It is used to measure the total volume of labour input, which is useful for economic analysis, but also as a characteristic of employment, useful for analysis of economic and social well-being, as well as structural changes in the labour force. In addition, it is used to define jobs and employment as either full-time or part-time.

There is no standard international definition of 'full-time'; however, many countries specify a minimum number of hours per week in statistical collections. Australia considers persons who work a total of 35 or more hours in the reference week to be employed full-time. This can be calculated for individual jobs (e.g. was the person employed full-time in their main job in the reference week?) and for all jobs combined (e.g. did the person work full-time in the reference week, in one or more jobs combined?). This definition is designed to be a robust and stable measure across the labour market, and as such does not take into account what individual employees, employers or industries subjectively consider to be 'full-time.'

Australia defines full-time employed persons as those who worked 35 hours or more during the reference week in all jobs in headline labour force estimates and publications.

Hours of work are measured in multiple ways, including hours actually worked in the reference period (which includes overtime), hours usually worked (which excludes irregular overtime and leave), or hours paid for in the reference period (which includes paid leave).

Standards for labour force statistics

The [Standards for Labour Force Statistics \(/statistics/standards/standards-labour-force-statistics/latest-release\)](/statistics/standards/standards-labour-force-statistics/latest-release) presents statistical standards for five of the commonly used core labour force variables:

- Labour Force Status
- Status in Employment
- Hours Worked
- Full-time/part-time Status
- Duration of Job Search

The standard for each variable includes the concept(s), definition(s), classification, coding structure, questionnaire modules and output categories used in ABS interviewer-based and self-enumerated collections.

Employment

Updates to this chapter

30/09/2022 - Concepts and sources on employment arrangements (e.g. Status in employment, Full-time/Part-time status, Casual employment) was removed from this chapter, and moved to a new [Employment arrangements \(/statistics/detailed-methodology-information/concepts-sources-methods/labour-statistics-concepts-sources-and-methods/2021/concepts-and-sources/employment-arrangements\)](/statistics/detailed-methodology-information/concepts-sources-methods/labour-statistics-concepts-sources-and-methods/2021/concepts-and-sources/employment-arrangements) chapter.

Industry employment guide

See our [Industry employment guide \(/statistics/understanding-statistics/guide-labour-statistics/industry-employment-guide\)](/statistics/understanding-statistics/guide-labour-statistics/industry-employment-guide) for summary information on industry employment data. It complements the detailed information in Labour Statistics: Concepts, Sources and Methods by providing practice guidance on industry employment measures, their purpose and how to use them.

Concepts and international guidelines

People in paid employment are those of working age who, during a short reference period, were engaged in any activity to produce goods or provide services for pay or profit.

Nineteenth International Conference of Labour Statisticians (ICLS) 2013

The notion 'for pay or profit' refers to work done as part of a transaction in exchange for remuneration payable in the form of wages or salaries for time worked or work done, or in the form of profits derived from goods and services produced through market transactions. It includes remuneration in cash or in kind, whether actually received or not, and may also comprise additional components of cash or in kind income. The remuneration may be payable directly to the person performing the work, or indirectly to a household or family member.

According to the international guidelines, people in employment comprise:

- employed people 'at work', i.e. who worked in a job for at least one hour; and
- employed people 'not at work' due to temporary absence from a job, or due to working-time arrangements (such as shift work, flex time and compensatory leave for overtime).

The international definition of employed persons on "temporary absence" during a short reference period refers to those who, having already worked in their present job, were "not at work" for a short duration but maintained a job attachment during their absence. In such cases, "job attachment" is established on the basis of the reason for the absence and, in the case of certain reasons, the continued receipt of remuneration and/or the total duration of the absence as self-declared or reported, depending of the statistical source.

Reasons for absence that are by their nature usually of short duration, and where "job attachment" is maintained, include those such as sick leave due to own illness or injury (including occupational), public holidays, vacation or annual leave, and periods of maternity or paternity leave as specified by legislation.

Reasons for absence where the "job attachment" requires further testing include, among others: parental leave, educational leave, care for others, other personal absences, strikes or lockouts, reduction in economic activity (e.g. temporary lay-off, slack work), disorganisation or suspension of work (e.g. due to bad weather, mechanical, electrical or communication breakdown, problems with information and communication technology, shortage of raw materials or fuels). For these reasons, a further test of receipt of remuneration and/or a duration threshold should be used.

The duration threshold should be, in general, not greater than three months taking into account periods of statutory leave entitlement specified by legislation or commonly practiced, and/or the length of the employment season so as to permit the monitoring of seasonal patterns. Where the return to employment in the same economic unit is guaranteed, this threshold may be greater than three months. For operational purposes, where the total duration of the absence is not known, the elapsed duration may be used.

The ABS produces estimates of employment from both household and business surveys. The definition of employment used in household surveys is designed to be consistent with the international standards. The definition of employment used in business surveys relates more closely to paid employment.

Definitions used in ABS household surveys

Three different definitions of employment are used in ABS household surveys. Information on the relevant questionnaire modules is contained in [Standards for Labour Force Statistics \(/statistics/standards/standards-labour-force-statistics/2018\)](https://www.abs.gov.au/statistics/standards/standards-labour-force-statistics/2018).

Labour Force Survey

The LFS is designed to produce estimates of employment (and unemployment). The questionnaire module used in the LFS is referred to as the Labour Force Survey Questionnaire Module. It uses a comprehensive and detailed set of questions to precisely measure the numbers and certain characteristics of persons in employment and unemployment. The LFS questionnaire module is available from the [LFS methodology \(/methodologies/labour-force-australia-methodology/oct-2021#data-download\)](https://www.abs.gov.au/methodologies/labour-force-australia-methodology/oct-2021#data-download).

The definition of employment used in the LFS aligns closely with the concepts and international definitions outlined in earlier chapters. Employed persons are defined as all persons aged 15 years and over who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind, in a job or business or on a farm (comprising employees and owner managers of incorporated or unincorporated enterprises); or
- worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers); or
- were employees who had a job but were not at work and were:
 - away from work for less than four weeks up to the end of the reference week, or
 - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four week period to the end of the reference week, or
 - away from work as a standard work or shift arrangement, or
 - on strike or locked out, or
 - on workers' compensation and expected to be returning to their job; or
- were owner managers, who had a job, business or farm, but were not at work.

For employees absent from work, a condition of formal job attachment is considered to exist in any of the following circumstances:

- short periods of absence (less than four weeks to the end of the reference week);
- long periods of absence (four weeks or more to the end of the reference week) and receipt of wages or salary for some or all of the four week period to the end of the reference week, such as persons on paid leave;
- any period of absence away from work as a standard work or shift arrangement;
- any period of absence on strike or locked out; and
- any period of absence with continued receipt of workers' compensation payments, and an expectation to return to work for the current employer.

The LFS, while mostly aligned with the international definition, has a narrower temporal definition of formal job attachment for employees absent from work. The international definition notes a duration threshold should be, in general, not greater than three months taking into account periods of statutory leave entitlements specified by legislation or common practices, and/or the length of the employment season so as to permit the monitoring of seasonal patterns. Where the return to employment in the same economic unit is guaranteed, this threshold may be greater than three months. The LFS condition of formal job attachment for employees is outlined above.

In the LFS, those who are self-employed, employers and owner managers absent from work during the reference week are defined as employed without further testing of formal job attachment. Contributing family workers who are absent from work in the reference week are not considered to be employed. The international guidelines relating to formal job attachment outlined above apply to all employed persons who were temporarily absent from work.

Other ABS household surveys and Special Social Surveys

In other household surveys and Special Social Surveys, where employment is an explanatory or classificatory variable, it is generally not practical to determine employment as precisely as in the LFS. While estimates of employment produced from these surveys are designed to be consistent with the international concept of employment, the definition used is slightly broader than that used in the LFS.

A shorter module, referred to as the Household Survey Questionnaire Module, is used in most other ABS household surveys and Special Social Surveys to produce estimates of labour force status. Employment is more broadly defined in these modules than in the LFS.

Census of Population and Housing

There is also a labour force module in the Census of Population and Housing. This module is shorter than the Household Survey Questionnaire module, and is generally completed through a self-enumeration mode.

While aggregates produced from household surveys and the Census which do not use the Labour Force Survey Questionnaire Module are designed to be consistent with the international concepts of employment and unemployment, the treatment of certain small population groups is simpler and less precise than that used in the LFS. Consequently, there are differences between estimates produced from the LFS and those produced from the Census or from household surveys using the reduced modules.

Definition of employment used in ABS business surveys

Concepts of employment used in ABS business surveys are narrower than the concept used in ABS household surveys. While estimates of employment from household surveys are comprised of persons engaged in work, estimates from business surveys are of jobs involving paid employment. There are two important distinctions between these estimates: the first relates to the statistical unit being measured, i.e. persons versus jobs; and the second to the concept being measured, i.e. (total) employment versus paid employment. These are discussed further below.

Estimates of employment from business surveys refer to jobs rather than persons. For example, persons holding jobs with different employers would be counted in ABS household surveys as employed once, but in ABS business surveys would be counted for each job held.

Estimates of employment from business surveys mainly relate to paid employment. Paid employment is one component of total employment; when combined with self-employment, it would provide a concept of employment that is consistent with the international concepts. However, the coverage of paid employment applied in ABS business surveys is narrower than that outlined in the international guidelines. It excludes:

- jobs involving paid employment that do not appear on business payrolls (from which information on employment is sourced within businesses), such as jobs that are paid in kind only, and jobs from which occupants are absent without pay (for a lengthy period); and
- jobs involving paid employment in businesses that have limited coverage on the ABS Business Register (from which the samples for most ABS business surveys are drawn), such as private households engaging staff.

Some industry and economy-wide ABS business surveys, however, do include a component of self-employment as well as paid employment in their surveys.

Estimates of the number of paid employment jobs (also referred to as employee jobs) from business surveys are not equivalent to estimates of the number of persons in paid employment jobs (also referred to as employees) from household surveys. When comparing estimates of the employee jobs from ABS business surveys to estimates of employees from ABS household surveys, the differences outlined above should be considered.

Data sources

Estimates of employment are available from the following ABS household surveys:

- the LFS (and its supplementary and multi-purpose household surveys);
- the Census of Population and Housing; and
- Special Social Surveys.

Estimates of employee jobs are produced from the following ABS business surveys:

- the Survey of Employment and Earnings (SEE) (Public Sector only);
- the Economic Activity Survey (EAS) (predominantly Private Sector);
- the Survey of Employee Earnings and Hours (EEH); and
- from time to time, business surveys targeted to particular industries or sectors.

Estimates of employment are also available from the Labour Account and the Linked Employer-Employee Dataset (Jobs in Australia).

Many of these data sources include industry employment estimates. Use our [Industry employment guide \(/statistics/understanding-statistics/guide-labour-statistics/industry-employment-guide\)](#) to learn more about the different measures and how to use them.

Labour Force Survey

The monthly LFS is the official source for Australia's employment and unemployment statistics. The definition of employment used in the LFS is outlined above. The survey uses a comprehensive and detailed set of questions to precisely measure the numbers and certain characteristics of persons in employment and unemployment as well as persons not currently economically active. Estimates from the LFS are available by State/Territory, Capital City/Rest of State, and 87 sub-State regions,

Census of Population and Housing

As discussed above, the Census of Population and Housing uses the Census of Population and Housing Questionnaire Module to produce employment estimates consistent with the international standards. However, because the self-enumerated questionnaire module defines employment less precisely than the LFS, estimates produced are not strictly comparable with those from the LFS. For these reasons, employment estimates from the Census should be used with caution in analyses where labour force activities are a major focus.

When comparing estimates of employment from the Census of Population and Housing with those produced from the LFS, users should also note differences between the two surveys in scope (for example, the inclusion of permanent defence forces in Census employment data) and methodology.

Special Social Surveys

As discussed above, most Special Social Surveys use the Household Survey Questionnaire Module for personal interviews to produce

employment estimates that are consistent with the international standards. However, because the reduced questionnaire module defines employment less precisely than the LFS, estimates produced are not strictly comparable with those produced from the LFS. When comparing employment estimates from Special Social Surveys with estimates from the LFS, users should also note differences in scope and methodologies across the surveys.

Survey of Employment and Earnings

The Survey of Employment and Earnings is a business survey producing estimates of employee jobs in the public sector. There are conceptual reasons, as well as methodological reasons, for differences in estimates of employment produced from business and household surveys.

Economic Activity Survey

The Economic Activity Survey is a business survey producing employment estimates. There are conceptual as well as methodological reasons for differences in estimates of employment produced from business and household surveys.

Employee Earnings and Hours

The Employee Earnings and Hours Survey is a business survey producing estimates on the composition and distribution of earnings and hours paid for, of employees, as well as information on how employees' pay is set - by award only, collective agreement or individual arrangement. For further information on the scope and collection methodology of EEH, see the EEH methodology page.

Employment arrangements

ABS measures of employment arrangements are collected from a number of sources, and include the following aspects:

- Status in employment
- Full-time / part-time status
- Casual employment
- Fixed-term employment
- Independent contracting
- Labour hire work
- Digital platform work
- Job stability and flexibility

Status in employment

Status in Employment is a classification of employed persons according to the nature of their relationship to the enterprise in which they work.

The term Status in Employment is used in the international standard as outlined in the International Classification of Status in Employment (15th International Conference of Labour Statisticians, 1993). The term Employment Status should be avoided, as it is easily confused with the concept of Labour Force Status.

Previously in labour statistics two main employment classifications were used: Status in Employment and Employment Type. While the previous version of Status in Employment was necessary in the context of national accounting and the measurement of income, as Compensation of Employees (the largest component of Gross Domestic Product) is based on the System of National Accounts definition of 'employee', it did not provide the most useful representation for analysis of the labour market.

Employment Type aimed to capture the fundamental nature of employment relationships, which was whether a person worked for an employer or operated their own business, regardless of the legal status of that business. This meant that in the Status in Employment classification, persons who operated their own incorporated enterprise (owner managers of incorporate enterprises (OMIEs)) were included in the Employees category, whereas in Employment Type, this group was identified separately.

The ABS revised the Status in Employment classification in 2014 to provide a single labour market relevant classification that can meet all uses. The categories are conceptually consistent and able to be aggregated or disaggregated to match the previous version of the Status in Employment classification and the Employment Type classification.

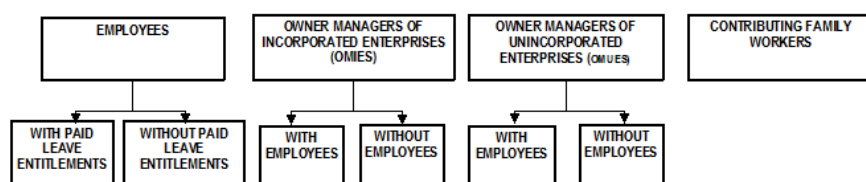
Definition

Status in Employment is determined by an employed person's position in relation to their job, and is usually collected in respect of a person's main job if they hold more than one job. The Australian Status in Employment classification classifies employed persons according to the reported relationship between the person and the enterprise for which they work, together with the legal status of the enterprise where this can be established. The groups distinguished in the Australian classification are:

- Employee: A person who works for a public or private employer and receives remuneration in wages, salary, on a commission basis (with or without a retainer), tips, piece-rates, or payment in kind, and who does not operate his or her own incorporated or unincorporated enterprise;

- Owner manager of incorporated enterprise (OMIE) with employees: A person who operates his or her own incorporated enterprise, that is, a business entity which is registered as a separate legal entity to its members or owners (also known as limited liability company), and hires one or more employees in addition to themselves and/or other owners of that business;
- Owner manager of incorporated enterprise (OMIE) without employees: A person who operates his or her own incorporated enterprise, that is, a business entity which is registered as a separate legal entity to its members or owners (also known as a limited liability company), and hires no employees apart from themselves or other owners of that business;
- Owner manager of unincorporated enterprise (OMUE) with employees: A person who operates his or her own unincorporated enterprise or engages independently in a profession or trade, and hires one or more employees in addition to themselves and/or other owners of that business;
- Owner manager or unincorporated enterprise (OMUE) without employees: A person who operates his or her own unincorporated enterprise or engages independently in a profession or trade, and hires no employees apart from themselves or other owners of that business;
- Contributing family worker: A person who works without pay in an economic enterprise operated by a relative.

Status in Employment



The Australian Status in Employment classification classifies employed persons according to the reported relationship between the person and the enterprise for which they work, together with the legal status of the enterprise where this can be established. The groups distinguished in the Australian classification are: Employer: A person who works for a public or private employer and receives remuneration in wages, salary, on a commission basis (with or without a retainer), tips, piece rates, or payment in kind, and who does not operate his or her own incorporated or unincorporated enterprise; Owner manager of incorporated enterprise (OMIE) with employees: A person who operates his or her own incorporated enterprise and hires one or more employees in addition to themselves and/or other owners of that business; Owner manager of incorporated enterprise (OMIE) without employees: A person who operates his or her own incorporated enterprise and hires no employee apart from themselves or other owners of that business; Owner manager of unincorporated enterprise (OMUE) with employees: A person who operates his or her own unincorporated enterprise or engages independently in a profession or trade, and hires one or more employees in addition to themselves and/or other owners of that business; Owner manager of unincorporated enterprise (OMUE) without employee: A person who operates his or her own unincorporated enterprise or engages independently in a profession or trade, and hires no employees apart from themselves or other owners of that business; and Contributing family worker: A person who works without pay in an economic enterprise operated by relative.

The 'Employee', 'Owner manager of incorporated enterprise with employees', and 'Owner manager of incorporated enterprise without employees' series combine to provide estimates consistent with Compensation of Employees within the National Accounts.

Full-time / Part-time status

Full-time/part-time status is widely used to categorise people or jobs in terms of the number of hours worked. This is of interest in understanding the nature of employment, particularly when cross-classified with socio-economic characteristics.

Most ABS household surveys, including the LFS, define full-time/part-time status of employed people in terms of the hours actually and/or usually worked (in all jobs). In some cases, a subjective approach based on respondents' perception of their full-time or part-time status is used. This approach is most often used where information is sought about work that is not currently being undertaken, and where recall problems may be encountered using a more objective approach.

ABS business surveys classify employee jobs, rather than people, as full-time or part-time. Classification of employee jobs as full-time or part-time is based on the whether the person has been engaged by the employer on a full-time or part-time basis.

Definition

People are defined as employed part-time in the LFS if they usually work less than 35 hours per week, and actually worked less than 35 hours in the survey reference week in all of their jobs. Full-time employed persons are defined as those who usually work 35 hours or more per week, regardless of how many hours they actually worked, and those who actually worked 35 hours or more in the reference week despite usually working less than 35 hours per week. Part-time employment is defined solely on the basis of hours worked, and does not depend on employee or employer perception of whether the person is full-time or part-time.

Full-time and part-time employment

	Usually works less than 35 hours	Usually works 35 or more hours
Actually worked less than 35 hours	Part-time	Full-time
Actually worked 35 or more hours	Full-time	Full-time

Actual hours worked refers to hours actually worked during normal periods of work in the reference week, as well as any overtime worked, excluding any time off or leave. Usual hours refer to those worked in a 'typical' period, as opposed to strictly in the specified

reference period. Collecting information on usual hours reduces the impact that leave and other absences have on actual hours worked, while actual hours mitigates the subjective nature of defining 'usual' or 'typical' behaviour.

In the LFS both actual and usual hours worked information are collected, deriving full-time employed people as those who:

- usually work 35 hours or more per week (in all jobs); or
- although usually working less than 35 hours a week, actually worked 35 hours or more during the reference week.

Part-time employed people as those who:

- usually work less than 35 hours per week, and either did so during the reference week, or were not at work in the reference week.

In other household surveys only usual hours of work are collected, and full-time/part-time status is based on the total number of hours usually worked per week in all jobs. Full-time employed people are those who usually work 35 hours or more per week (in all jobs), while part-time employed people are those who usually work less than 35 hours per week (in all jobs).

Where only actual hours worked are collected (e.g. the Census of Population and Housing), full-time/part-time status is based on the actual hours worked in the reference week. Full-time employed people are those who worked 35 hours or more in the reference week (in all jobs), while part-time employed people are those who worked less than 35 hours in the reference week (in all jobs). Where actual hours worked is used, there is also a third category for people who are employed, but not at work in the reference week.

Where hours worked are not collected, full-time/part-time status is based on the respondent's perception of whether they work full-time or part-time, however this method is not considered a standard. Guidance can be given to refer to a 35 hour per week threshold to be full-time.

In business surveys, full-time/part-time status is collected for employee jobs. Full-time employee jobs are defined as those where the occupant normally works the agreed or award hours for a full-time employee in their occupation. If agreed or award hours do not apply, the job is regarded as full-time if the occupant usually works 35 hours or more per week. Part-time employee jobs are those where the occupant normally works less than the agreed or award hours for a full-time employee in their occupation. If agreed or award hours do not apply, the job is regarded as part-time if the occupant usually works less than 35 hours per week.

In comparison with the estimates of full-time/part-time status from the Labour Force Survey, other household surveys result in lower estimates of persons employed full-time, and higher estimates of persons employed part-time. This is because other household surveys do not include a question on actual hours worked in the reference week, so it is not possible to include persons who usually work part-time, but who worked full-time hours in the reference week, in the estimate of persons employed full-time. Usual hours worked is used in other household surveys because it can be meaningfully asked of all employed persons, whether or not they are at work during the reference week. Asking only one question for hours worked minimises the size of the question set and avoids complex sequencing.

Casual employment

There is no single measure to determine the number of people in casual employment; however, the ABS most regularly uses information on paid leave entitlements as a proxy for measuring casual employment in the Australian context. The ABS has three data items related to casual employment:

- Employees without paid leave entitlements;
- Employees who receive a casual loading; and
- Employees who consider their job to be casual (self-perception).

Paid leave entitlements

The ABS uses 'employees without paid leave entitlements' as the primary measure of casual employment. This is an objective measure that can be collected consistently. An employee with paid leave entitlements has access to either paid holiday leave or paid sick leave, or both. An employee is considered to be without leave entitlements if they identify as not having access to either paid sick leave or holiday leave, or did not know their entitlements.

Casual loading

In lieu of paid leave, some casual employees are entitled to a 'casual loading' - a higher hourly rate of pay to compensate for not being entitled to paid holiday and/or sick leave. Survey respondents are asked whether they receive a casual loading, however around one-third of respondents report not receiving a casual loading, despite being without leave entitlements. This may be the case, or may reflect a lack of awareness that a loading is included in their pay. In some households, responses are provided by one member of the household on behalf of other members, and the respondent may be unaware of whether a casual loading is paid to the other household members.

Self-perception

The third data item used to consider casual employment is whether the survey participant considers their job to be casual. Casual work is often viewed as less secure than other types of employment, as there may not be a guarantee of ongoing work, and hours of work may vary based on availability of hours offered by the employer. These are common characteristics of casual employment, but they apply to

casual workers to varying degrees, and may also apply to non-casual workers. An employee's perception of whether or not their job is casual may be based on commonly recognised features of casual employment such as these, and may or may not reflect the actual conditions of their employment. For example, an employee may perceive that they are guaranteed a minimum workload per week, but this may not align with their employer's understanding.

Fixed-term employment

A fixed-term contract is an employment contract which specifies that employment with the employer is not expected to continue beyond a particular date or event.

Independent contractors

Independent contractors are sometimes referred to as consultants or freelancers. The term 'contractors' is also frequently used, however this is a broad term that is often used to describe people with a variety of forms of employment, for example, not only true independent contractors, but also employees engaged in short-term or fixed-term work, often engaged through a third-party (e.g. a labour hire firm/employment agency). The ABS measure of independent contractors refers to people who are not employees, but who may be operating in a similar manner to employees.

Independent contractors are persons who operate their own business, and contract to perform services for others without having the legal status of an employee, i.e. persons who are engaged by a client rather than an employer. Independent contractors are engaged under a contract for services (a commercial contract), whereas employees are engaged under a contract of service (an employment contract).

Questions in the Characteristics of Employment Survey (COE) identify the key characteristics of independent contractors. These questions are:

- Do you work as an independent contractor in your job?
- Do you receive a pay slip/advice?
- Do you/Does your business invoice or bill clients/employers?
- Excluding wages and salary, are you able to make drawings from your employer/business?

The following table shows how people are classified as independent contractors.

Decision table for Independent Contractors

Decision Table: Independent Contractors					
	Whether considered to be independent contractor?	Whether received pay slip/advice?	Whether invoices/bills clients/employers?	Whether able to makes drawings from employer/business?	Result
Employess (excluding OMIEs)	Yes	Yes	Yes		Independent Contractor
	Yes	Yes	No	Yes	Independent Contractor
	Yes	Yes	No	No	
	Yes	No	Yes		Independent Contractor
	Yes	No	No		Independent Contractor
	No	Yes			
	No	No	Yes		Independent Contractor
	No	No	No		
Owner Managers (OMIEs and OMUEs)	Yes	Yes	Yes		Independent Contractor
	Yes	Yes	No	Yes	Independent Contractor
	Yes	Yes	No	No	
	Yes	No	Yes		Independent Contractor
	Yes	No	No		Independent Contractor
	No	Yes	Yes		
	No	Yes	No	Yes	
	No	Yes	No	No	
	No	No	Yes		
	No	No	No		

Labour hire workers

Instead of contacting employers directly, some people engage the services of a labour hire firm or employment agency to act as a third party to assist in finding suitable employment. Similarly, some businesses use the services of these firms to source labour rather than directly engaging workers.

Labour hire firms and employment agencies are engaged in personnel search, or selection and placement of persons for an employing organisation. Such firms may either match employees and employers directly, or might provide labour through their own pool of employees.

Labour hire firms and employment agencies perform a number of functions in the labour market, including maintaining a pool of potential employees, matching a person directly with an appropriate employer, and assisting employers to source suitable staff. They often also bear employee labour costs, such as wages, workers compensation and superannuation, which are transferred to employers through service fees.

Digital platform workers

The ABS, like most national statistical organisations, is working to expand its statistics on relatively new and emerging forms of employment, including digital platform workers. While digital platform workers and their work have always been included within existing labour statistics on employment and hours, they are a relatively small group of workers who have not been separately identifiable.

Digital platform work is a relatively new form of digitally-enabled employment but it also shares common elements with older forms of short-term employment, that have always existed. Many occupations include a combination of longstanding forms of employment, together with new and emerging forms, including digital platform work.

Specifically measuring digital platform workers and their working arrangements will provide insights into the extent to which this working arrangement is used in Australia and how this is changing over time, the nature of digital platform work and the characteristics of digital platform workers.

The ABS has been working with other parts of the Australian Government, including the Department of Employment and Workplace Relations, to ensure that data gaps for digital platform workers are effectively identified and progressively addressed.

Concepts and international guidelines

People in employment are those of working age who, during a specific reference period, were engaged in any activity to produce goods or provide services for pay or profit. Employment consists of work for at least an hour in the reference period.

The international statistical community (including the Organisation for Economic Co-operation and Development and the United Nations Economic Commission for Europe) are in the process of developing conceptual and measurement approaches for new forms of employment, including digital platform workers. The ABS is involved in these discussions and is leveraging the experience of a broad range of countries, given this is still a relatively new area of labour statistics around the world.

In 2013, Resolution I of the 19th International Conference of Labour Statisticians (the forum that sets international standards for labour statistics) defined digital platform work as

"any productive activity performed by persons to produce goods or provide services carried out through or on a digital platform".

In 2022, the United Nations Economic Commission for Europe published a more detailed definition for digital platform workers:

"Digital platform employment refers to employment performed through an online tool or an app that matches supply and demand for employment, most often based on an algorithm. An important aspect to consider in this context is that digital platform employment is about the assignment of individual tasks (smaller or larger), rather than about jobs (United Nations Economic Commission for Europe Handbook on Forms of Employment, 2022)."

The ABS is taking the evolving international conceptual and measurement frameworks for digital platform workers and applying it in the Australian context, beginning with a series of experimental questions that will be asked in conjunction with the Labour Force Survey, asked of respondents in the outgoing survey rotation group.

Digital platform work and the gig economy

The 'Gig Economy' is a very broad concept, and potentially includes many different groups of people that can be categorised in different ways. For instance, it can potentially include a combination of digitally-enabled and non-digitally-enabled forms of employment.

Within digitally-enabled employment it can also involve a broad range of groups of workers and work, such as rental economy workers (e.g. Airbnb), marketplace workers (e.g. eBay), and labour services (e.g. Uber). It is important to note that not all of these people are necessarily in scope of the standard definition of employment that is used by the ABS.

The gig economy also encompasses many different activities, which range from buying and selling goods to providing short term labour services, such as providing care.

Given this breadth it is important for the ABS to consider the scope for its initial measurement of digital platform work and workers. Given the work associated with the supply of labour services through digital platforms are the most relevant aspect of the gig economy for labour statistics, and of the highest interest in Australia, the ABS has focused on this in its initial scope.

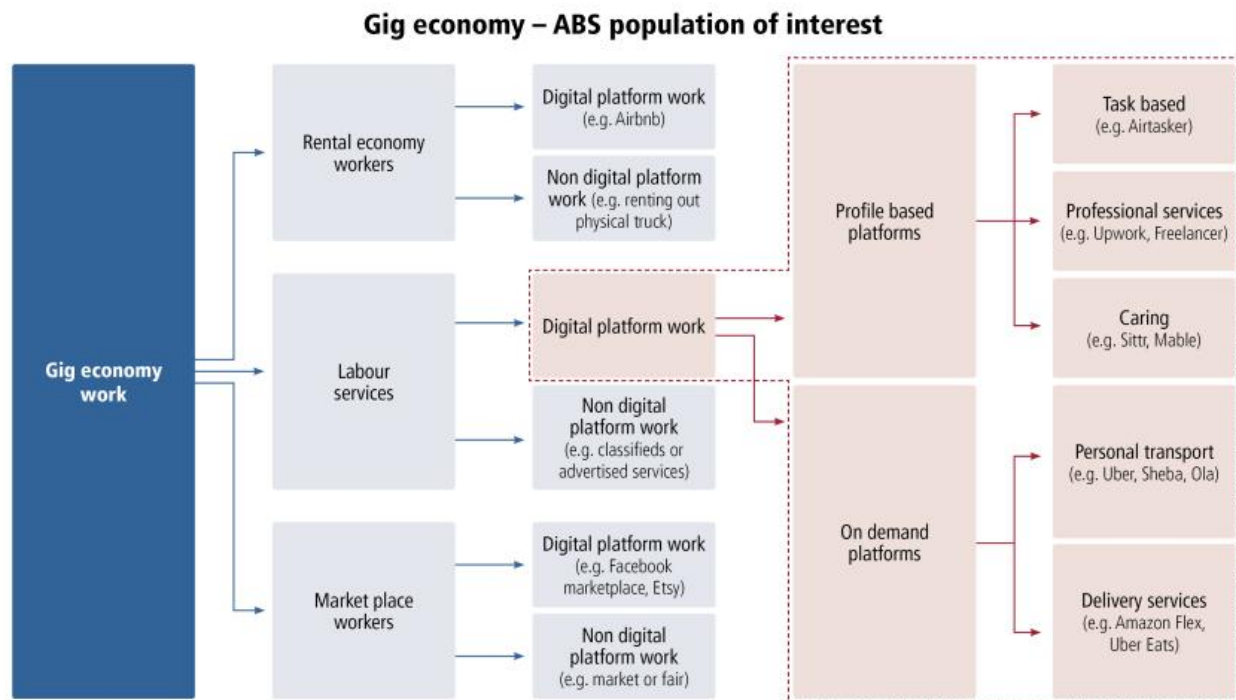
The ABS is defining digital platform work as:

"the provision of fixed duration labour services, in the form of tasks/jobs which are accessed by the worker through digital platforms and are paid per unit of work delivered through the same platform".

Figure 1 outlines a framework for gig economy work, including identifying the labour services digital platform work component of the gig economy, which is the measurement focus of the ABS.

1. Framework for gig economy work

1. Framework for gig economy work



It is important to note that some businesses allocate work to their employees using digital platforms, through applications and algorithms, without their workers being considered digital platform workers. This reflects some of the inherent challenges in measuring digital platform work and workers, given many businesses and jobs in the labour market are increasingly digitally-enabled.

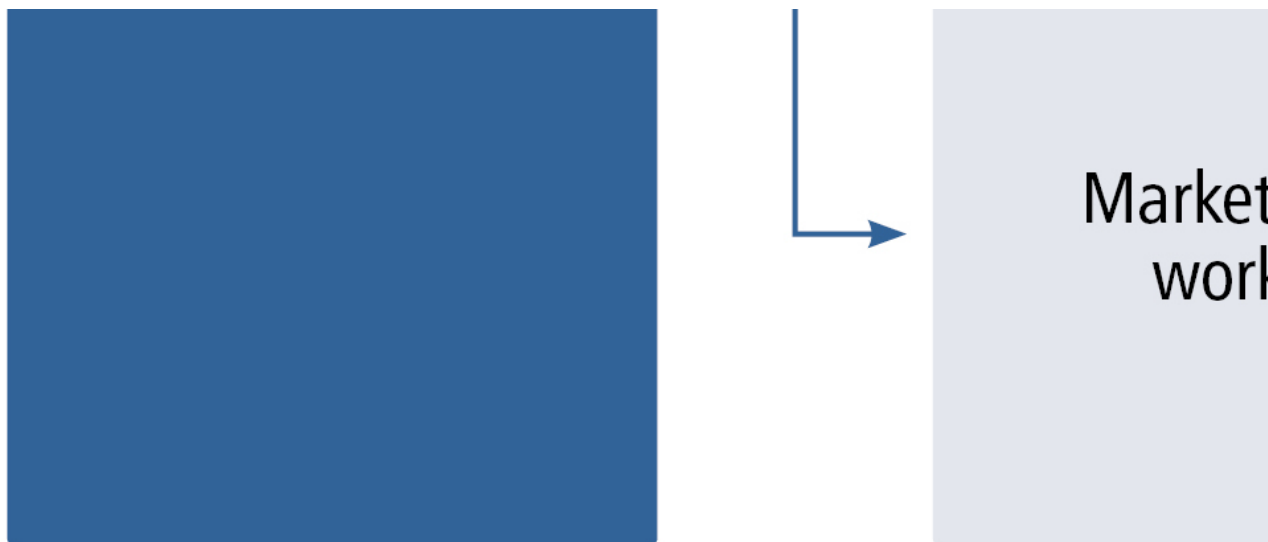
Digital platform workers are usually considered to be legally and functionally a subset of owner managers, rather than employees, according to the status of employment classification (which categorises employed people based on the nature of their relationship with the enterprise in which they work).

However, as with independent contractors, whom the ABS has been separately identifying using additional survey questions since 2008, there may be some digital platform workers who work in a way that is noticeably different to other types of owner managers. For example, some of them may not necessarily have a registered Australian Business Number.

There may be a considerable proportion of digital platform workers who are multiple job holders, who may be operating as employees in their main job and a digital platform worker in their secondary job. This type of additional work is commonly referred to as a “side hustle” by those working in this way.

Digital Platform Worker survey content and approach

The ABS has developed an initial experimental survey module on digital platform workers



The diagram shows that 'Gig economy work' is comprised of 'Rental economy workers', 'Labour services', and 'Market place workers'. Each can be broken into into 'Digital platform work' or 'Non-digital platform work'. 'Labour services digital platform work', which is the ABS population of interest, is either enable through 'Profile based platforms' or 'On demand platforms'. 'Profile based platforms' include those that are 'Task-based' (e.g. Airtasker), 'Professional services' (e.g. Upwork, Freelancer), and 'Caring' (e.g. Sittr, Mable). 'On demand platforms' include 'Personal transport' (e.g. Uber, Sheba, Ola) and 'Delivery services' (e.g. Amazon Flex, Uber Eats).

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Digital platform workers are usually considered to be legally and functionally a subset of owner managers, rather than employees, according to the status of employment classification (which categorises employed people based on the nature of their relationship with the enterprise in which they work).

However, as with independent contractors, whom the ABS has been separately identifying using additional survey questions since 2008, there may be some digital platform workers who work in a way that is noticeably different to other types of owner managers. For example, some of them may not necessarily have a registered Australian Business Number.

There may be a considerable proportion of digital platform workers who are multiple job holders, who may be operating as employees in their main job and a digital platform worker in their secondary job. This type of additional work is commonly referred to as a "side hustle" by those working in this way.

Digital Platform Worker survey content and approach

The ABS has developed an initial experimental survey module on digital platform workers for the 2022-23 financial year, which it is currently in the field. The initial module is included in the ABS Multi-Purpose Household Survey, which is asked of outgoing respondents from the monthly Labour Force Survey.

From this, the ABS expects to progressively analyse data through 2022-23, to identify further refinements to the survey questions for 2023-24, and to determine what initial experimental statistics can be produced for 2022-23.

The questions in the initial Digital Platform Workers module include:

- Whether people have undertaken paid-per-task work through digital platforms in the last 4 weeks
- The different types of digital platforms used, and the type of tasks undertaken
- How long they have been using digital platforms to undertake paid-per-task work
- Reasons for undertaking digital platform work and preferred work arrangements
- Time spent searching or bidding for tasks
- Hours spent undertaking paid tasks on digital platforms (in the past week)
- Hours spent undertaking unpaid tasks associated with digital platform work (in the past week)
- Percentage of total earnings from digital platform work

The Labour Force Survey collects information on industry, occupation, hours and other working arrangements, and a range of demographic characteristics (for example, age and sex). Some of this information will also be available to understand digital platform work and workers.

Job stability and flexibility

Measures of job stability complement measures of hours of work, full-time and part-time status, and other classifications of jobholders (such as status in employment), in order to further describe the nature of employment conditions. The ABS collects a range of data items related to job stability and flexibility. These include data on expectations about job tenure (for example, whether an employee expects to be with their current employer in 12 months' time), the variability of earnings and hours from week to week, whether an employed person has guaranteed minimum hours, and whether an employed person is a shift worker, or is required to be on call or standby.

Job flexibility measures include whether employees had an agreement with their employer to work flexible hours, whether they usually work at home in their main job, and the main reason for working at home.

Data sources

Status in employment

Status in Employment is collected in household collections. Each of the three labour force status questionnaire modules includes questions to derive Status in Employment. They are:

- the Labour Force Survey Questionnaire Module used in the ABS Labour Force Survey (interviewer administered or on-line collection);
- the Household Survey Questionnaire Module used in other ABS household based surveys (interviewer administered); and
- the Census of Population and Housing Questionnaire Module used in the Census, and also suitable for use in other self-enumeration and administrative data collections conducted by agencies other than the ABS.

Full-time/part-time status

Full-time/part-time Status is collected in the following surveys:

- the Labour Force Survey;
- household based surveys, such as the Survey of Income and Housing;
- the Census of Population and Housing;
- the Survey of Employee Earnings and Hours; and
- Average Weekly Earnings Survey.

Casual employment

The following ABS household surveys collect data on measures of casual employment:

- Labour Force Survey
- Characteristics of Employment Survey (COE);
- Multipurpose Household Survey topics:
 - Retirement and Retirement Intentions
 - Work Related Injuries.

In addition to the household surveys, the Employee Earnings and Hours business survey also collects information about whether an employee is casual. In this survey, employers are asked to identify whether the employees selected in the survey are casual, and in conjunction they are asked whether these employees receive a casual loading or a higher rate of pay to compensate for a lack of leave entitlements. Information on employees is collected directly from the employer's payroll records, and this is an alternative way of looking at casuals as in this survey they are identified as such by their employers.

Fixed term employment

Information on fixed-term employment is available from the Characteristics of Employment Survey (COE). Data classifying employees of businesses as permanent, fixed-term contract, or casual are available from the Survey of Employee Earnings and Hours (EEH).

Independent contractors

Information on independent contractors is collected every second year from 2014 as a rotating questionnaire module in the COE survey.

Labour hire workers

Information on labour hire workers is collected every second year as a rotating questionnaire module in the Characteristics of Employment Survey (COE).

Digital platform workers

Information on digital platform workers is collected in the Multi-Purpose Household Survey, from 2022-23 onwards, which is asked of outgoing respondents in the monthly Labour Force Survey.

In time, the ABS expects to introduce a dedicated module within the 'Characteristics of Employment' supplementary topic in the Labour Force Survey, which already collects a broad range of working arrangement information from employed people on an annual basis.

Job stability and flexibility

Information on job flexibility and stability is available from the Characteristics of Employment Survey (COE).

Jobs

Concepts and definitions

Definition of a job

The 2008 System of National Accounts (SNA) provides one definition of a job:

"19.30...The agreement between an employee and the employer defines a job and each self-employed person has a job."

A job is conceptualised as a relationship between an employed person and employing enterprise, that is, between an employee and an employer or between a self-employed person (employee) and their own enterprise (employer). These jobs are often referred to in ABS statistics as 'filled jobs'.

Jobs can also exist in the absence of an employed person, referred to in ABS statistics as a 'vacant job'. Vacant jobs are positions which are available for immediate filling and for which recruitment action has been undertaken. For more information on vacant jobs, see the section: Job Vacancies.

Payment

Most jobs are performed by employed persons in return for some form of payment, whether it is in cash or in kind. As such, persons paid solely in kind, such as contributing family workers, are considered to have a job.

Not all jobs are paid, however, either in cash or in kind. People can be engaged in productive economic activity within an institutional unit for no apparent reward, in which case they are contributing to output but receiving no compensation. The 2008 SNA concept of a job includes these people as volunteer labour; however, they are excluded from the Australian System of National Accounts and also from Australian labour statistics (see the section: Institutional Units and the Economically Active Population).

Multiple jobs

A person can hold multiple jobs. For a person who is an employee of multiple employing enterprises, the SNA definition allows each agreement to be considered a separate job. The wording of the SNA is less clear in relation to self-employed persons, as it suggests that each self-employed person has only one job. In practice, however, this is not the case. Many self-employed persons hold additional jobs, either in additional self-employment enterprises or with employing enterprises as employees. In ABS statistics, both employees and self-employed persons can have multiple jobs.

Comparing jobs and employment

Every employed person has a job, however, because they can have multiple jobs, measures of employment and measures of jobs are conceptually different. It is important to distinguish between estimates of employment and estimates of jobs as conceptually different measures of labour. Household surveys typically estimate employment, such that they provide data on the number of people in the labour force (those who have jobs), not the number of jobs in the economy.

Estimates of employment from business surveys are typically measures of jobs. The employer is generally unable to provide information about their employees' other jobs. Because ABS business surveys sample businesses and not employees, multiple job holders may be included in the sample multiple times.

Changes in the level of employment from month to month are sometimes referred to as an increase or decrease in the number of "jobs" (e.g. jobs created or lost). This is an incorrect inference, as estimates of "employment" from the LFS refer to counts of people rather than counts of jobs.

The distinction between jobs and employment is also important when considering full-time/part-time status. As full-time/part-time status relates to a person's employment (based on the total hours they work in all of their jobs), the number of full-time employed people (and changes in that number) does not equate to the number of full-time jobs in the labour market. A person in full-time employment can hold more than one job (for example, two part-time jobs for which the combined number of hours worked totals 35 hours or more per week), whereas a full-time job represents one person employed full-time.

A number of examples illustrate this:

- if an unemployed person became employed full-time (by starting one full-time job), then the full-time employment estimate from the LFS would increase by one (in a business survey, or a 'jobs' count, this would lead to an increase in the jobs estimate of one);
- if an unemployed person became employed full-time (by starting two part-time jobs with a total of 35 hours of work or more per week), then the full-time employment estimate from the LFS would increase by one (however, in a business survey, or a 'jobs' count, this would lead to an increase in the jobs estimate of two);
- if a person who was already employed in one part-time job took on another part-time job, this would have differing impacts on the employment estimates from the LFS depending on the total number of hours worked: if the sum of hours worked in the two part-time jobs was fewer than 35 hours per week, the employment estimates from the LFS would remain unchanged, but if the sum of hours worked was 35 hours or more, the employment estimates from the LFS would show a decrease of one in part-time employment and an

increase of one in full-time employment (however, in both cases this would lead to an increase of one in the jobs estimate from a business survey);

- if a person who was employed in three part-time jobs (working a total of more than 35 hours per week) resigned from these and assumed one full-time job, this would have no impact on the employment estimates from the LFS (however, this would lead to a decrease of two in the jobs estimate - the number of part-time jobs would decrease by three while the number of full-time jobs would increase by one); and
- if a person employed in two part-time jobs became unemployed, the employment estimate from the LFS would decrease by one (however, this would lead to a decrease of two in the jobs estimate from a business survey).

Data sources

Labour Force Survey

Data from the Labour Force Survey (LFS) are used to provide regular estimates of employment; however, specific estimates of jobs are not produced. Up to June 2014, the LFS collected data on the number of multiple job holders, however did not collect the number of jobs they held. Estimates of jobs were created by weighting estimates of the number of multiple job holders from the LFS using estimates of the average number of jobs held by multiple job holders from the 2007 Survey of Employment Arrangements, Retirement and Superannuation. This method provided aggregate numbers of jobs but did not allow detailed disaggregation. For more information on this process, see [Estimating Jobs in the Australian Labour Market' in Labour Force, Australia, Feb 2013 \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6202.0Main%20Features1100Feb%202013\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6202.0Main%20Features1100Feb%202013).

In July 2014, the ABS introduced a series of changes resulting from the Labour Household Surveys Content Review. These included for the first time the collection in the LFS of the actual number of jobs held by each multiple job holder each month. These new data allow the number of jobs to be more accurately estimated, as the number of jobs held by each multiple job holder is directly collected. This allows for further disaggregation of the statistics; however, because the LFS does not provide detail about the jobs separately (such as which industry they are in), this analysis is still limited.

For more information on the data content and methodology of the LFS, see the section: Labour Force Survey.

Job Vacancies Survey

Estimates from this survey are produced according to the definitions outlined in the section: Job Vacancies. For more information on the data content and methodology of this survey, see the section: Job Vacancies Survey.

Other business surveys

Estimates of employment are created from several business surveys. Because these surveys are unable to identify individual employees across multiple businesses, these are rather estimates of jobs. The key business surveys which provide data on jobs are listed below. For more information on the specific data content and methodology of these surveys, see the relevant sections:

- Economic Activity Survey;
- Quarterly Business Indicators Survey; and
- Survey of Employment and Earnings.

Linked Employer-Employee Dataset

The Linked Employer-Employee Dataset (LEED) is compiled from administrative data using a census of tax records. Data on jobs from the LEED is published in Jobs in Australia (JIA). JIA provides statistics on jobs and job holders (employed persons) who are employees (including owner managers of incorporated enterprises – OMIEs) and owner managers of unincorporated enterprises (OMUEs).

In the LEED, a job is identified as a person's work or business activity that creates an income, reported in a Pay as You Go payment summary (PAYG) or an Individual Tax Return (ITR) submitted to the Australian Taxation Office (ATO). Data on most employee jobs is sourced from the payment summary data, while the ITR is used to inform on jobs outside of the PAYG system, including those held by OMUEs.

Measures of jobs from this source differ from other estimates in several key ways. The reference period covers a 12 month period. As a result, a person may have several jobs through that year, either concurrently or consecutively with one or multiple employers and thus statistics differ from point-in-time estimates of filled jobs. Similarly, OMUE jobs are identified in the ITR as an aggregate for a whole reference year. While a person may own and manage more than one enterprise, only one self-employment job can be identified (although an OMUE can also hold other jobs as an employee).

Australian Labour Account

The Australian Labour Account includes jobs as one of its four quadrants of labour, along with persons, volume, and payments, and sources data on jobs from a number of ABS household and business surveys.

The Australian Labour Account defines jobs as a set of production related tasks that can be assigned to and undertaken by a person, and for which they are usually, but not necessarily, remunerated either in money or in kind.

The Australian Labour Account includes all jobs created and maintained by institutional units resident in Australian economic territory, involving economic activity within the Australian application of the 2008 SNA production boundary. It includes both filled and vacant jobs, and distinguishes between main and secondary jobs. It classifies jobs according to the status in employment categories of the person filling the job, as well as a variety of job characteristics.

Weekly Payroll Jobs and Wages

Weekly Payroll Jobs and Wages is compiled using Single Touch Payroll (STP) data from the Australia taxation Office. Weekly Payroll Jobs and Wages provides a near real-time index of the change in the number of jobs.

Hours of work

Measuring the levels and trends of hours worked for different groups of employed persons is important in order to monitor working and living conditions, as well as analysing economic cycles. Information on hours of work enables various analytical insights such as: classification of employed persons into full-time and part-time status; the identification of underemployed persons; and the creation of aggregate monthly hours worked estimates.

There are four concepts addressed in this section:

- Hours usually worked
- Hours actually worked
- Hours paid for
- Normal hours of work

Hours worked has been defined in terms of time when (paid) employees were at the disposal of an employer; that is, when available to receive work orders from an employer or person in authority, with hours worked covering all jobs.

International Labour Organisation (ILO)

During such periods of availability as defined by hours worked, workers are expected to be ready to work if work is possible, requested or necessary. This general concept is made meaningful for the self-employed if it is taken to mean time when the self-employed are available to do their work, such as being at the disposal of clients, ready to receive purchase orders or available to make sales, etc. Further information is available in the [ILO Resolution concerning the measurement of working time \(http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_112455/lang-en/index.htm\)](http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_112455/lang-en/index.htm) (Eighteenth International Conference of Labour Statisticians, 2008).

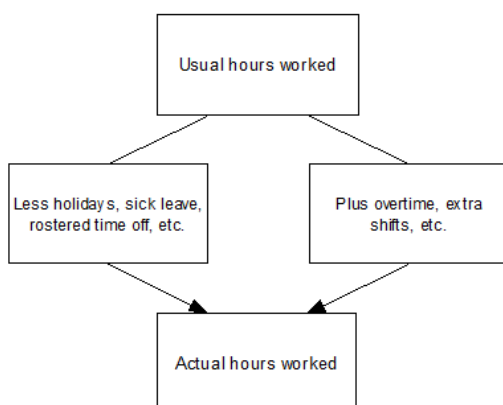
Hours usually worked

Hours usually worked is the typical number of hours worked in a job for a short reference period (such as one week) that is representative of a longer reference period (e.g. a month, quarter, season or year).

United Nations Economic Commission Europe

Usual hours may differ from actual hours worked at a given time if employed persons are away from work due to illness, vacation, strike, a change of job or other reasons, or are at work for more hours than normal due to overtime, extra shifts, etc.

Relationship between usual hours and actual hours worked



Outlines the concept of usual hours worked and actual hours worked. The concept of usual hours applies to both persons at work and to persons temporarily absent from work, and is defined as the hours worked during a typical week or day. On the other hand, actual hours worked (for a specific reference period) may differ from usual hours worked due to illness, vacation, strike, overtime work, a change of job, or similar reasons.

When analysing usual hours worked, consideration should be given to appreciate the different perceptions respondents may have when reporting the typical hours they work. The ILO guidelines say that "the typical value may be the modal (most frequently occurring) value of

the distribution of hours actually worked per short period over the long observation period, where meaningful". However, it is also possible that respondents average their actual hours worked over a long reference period to derive a typical value for the shorter period.

Measures of hours usually worked (in all jobs) are available from: the Labour Force Survey (LFS) and LFS supplementary surveys, such as Participation, Job Search and Mobility (PJSM) and Characteristics of Employment (COE). Measures of usual hours of work are not available from ABS business surveys, and are not collected in the Census of Population and Housing.

Hours actually worked

Hours actually worked is the time spent in a job for the performance of activities that contribute to the production of goods and services during a specified short or long reference period.

International Labour Organisation

International resolutions relating to actual hours worked, adopted by the Eighteenth International Conference of Labour Statisticians (ICLS) in 2008, refer to wage and salaried employees. There are no international recommendations relating to actual hours worked for all categories of the employed population. However, the ILO in its manual 'Surveys of Economically Active Population, Employment, Unemployment and Underemployment' suggests that actual hours worked in a given job should be defined to cover all types of employment in labour force surveys. Hours actually worked is the time spent in a job for the performance of activities that contribute to the production of goods and services during a specified short or long reference period.

According to the ILO resolution, actual hours of work measured within the System of National Accounts production boundary includes all time spent directly on, and in relation to, productive activities, down time and resting time, such as:

- time spent in addition to hours worked during normal periods of work (including overtime);
- time spent at the place of work on activities such as the preparation of the workplace, repairs and maintenance, preparation and cleaning of tools, and the preparation of receipts, time sheets and reports;
- time spent at the place of work waiting or standing by due to machinery or process breakdown, accident, lack of supplies or power or internet access, etc.; and
- time corresponding to short rest periods (resting time) including tea and coffee breaks or prayer breaks.

Excluded are:

- hours paid for but not worked such as paid annual leave, public holidays or paid sick leave;
- meal breaks; and
- for paid employment, time spent on travel to and from work when no productive activity for the job is performed (even when paid by the employer).

The ILO suggests that for multiple job holders, actual hours worked should include the hours worked at all jobs.

ABS measures of actual hours of work are consistent with the international recommendations outlined above.

Measures of actual hours of work are available from a number of ABS household surveys: the LFS; various labour-related supplementary topics to the LFS; and various Special Social Surveys, including the Census of Population and Housing. Measures of actual hours of work are not available from ABS business surveys.

Monthly hours worked in all jobs

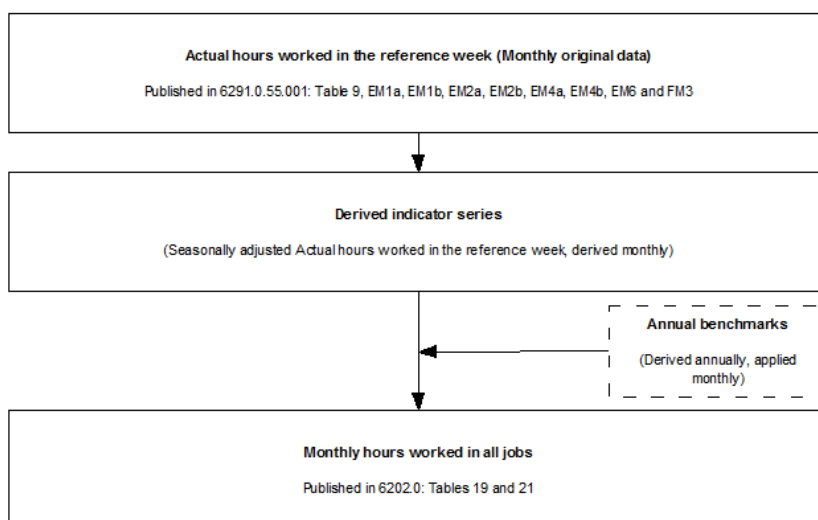
Monthly hours worked in all jobs is a measure of the total number of hours actually worked by employed persons in a calendar month. The methodology used to produce monthly hours worked in all jobs means that they are synthetic or modelled estimates.

Seasonally adjusted monthly hours worked in all jobs estimates are produced by combining two series.

The first series is the seasonally adjusted actual hours worked in the reference week, adjusted for holiday timing. These estimates provide an indication of movements across months.

The second series is an annual benchmark series containing original estimates of actual hours worked in each financial year. The annual actual hours worked original estimates are calculated by determining the actual hours worked for each week of the financial year. As actual hours worked are only collected in respect of the reference week of the LFS, actual hours worked for weeks not covered by the LFS are imputed based on the actual hours worked for the reference weeks in the adjacent months. Amongst other things, the imputation accounts for the effect of public holidays on hours worked; that is, it accounts for holidays that occur in the reference week of the LFS, as well as holidays that occur in weeks other than the reference week.

Actual (weekly) hours and monthly hours



Monthly hours worked in all jobs is a modelled estimates that is from the Labour Force Survey. Monthly hours worked in all jobs estimates are produced by combining two series: seasonally adjusted actual hours worked in the reference week, and an annual benchmark series containing original estimates of actual hours worked in each financial year. As actual hours worked are only collected in respect of the reference week of the LFS, actual hours worked for weeks not covered by the LFS are imputed based on the actual hours worked for the reference weeks in the adjacent months.

These two series are then combined to produce the seasonally adjusted monthly hours worked in all jobs series. A trend series is also subsequently produced. This approach ensures that:

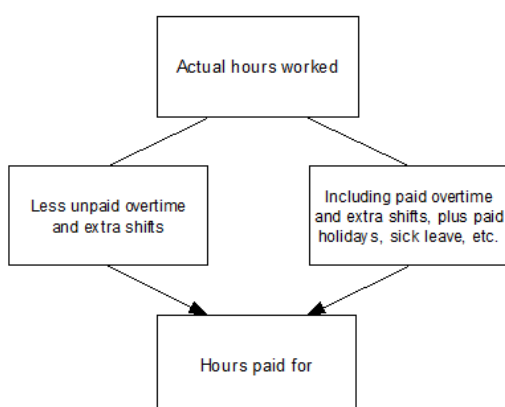
- the level of the aggregate monthly hours worked (seasonally adjusted) series is consistent with the level of the annual benchmarks; and
- the movements in the series are consistent with the movements in the seasonally adjusted actual hours worked in the reference week series.

Hours paid for

Hours paid for applies to a paid-employment job and to a self-employment job paid on the basis of time units. For a paid-employment job, hours paid for is the time for which payment has been received from the employer (at normal or premium rates, in cash or in kind) during a specified short or long reference period, regardless of whether the hours were actually worked or not. Hours paid for:

- includes time paid but not worked, such as paid annual leave, paid public holidays and certain absences such as paid sick leave; and
- excludes time worked but not paid by the employer, such as unpaid overtime, and absences that are not paid by the employer, such as unpaid educational leave or maternity leave that is paid through transfers by government from social security systems.

Relationship between actual hours worked and hours paid for



Outlines the difference in actual hours worked and hours paid for. Hours paid for applies to a paid-employment job and to a self-employment job paid on the basis on time units. It includes time paid but not worked, such as paid annual leave, paid public holidays and certain absences such as paid sick leave. It however does excludes time worked but not paid by the employer, such as unpaid overtime. Hours paid for will differ from the number of hours actually worked if an employee works more or less hours than their paid hours. Hours paid will also differ from usual hours in come cases, for example if an employee persons long hour in some weeks to have rostered days or weeks off.

As such, hours paid for will differ from the number of hours actually worked if an employee works more or less hours than their paid hours. Hours paid for will also differ from usual hours in some cases, for example if an employee performs long hours in some weeks to have rostered days or weeks off.

Measures of hours paid for are collected from business payroll records in the ABS business survey of Employee Earnings and Hours (EEH).

EEH also collects information on the following components:

- ordinary time hours paid for - defined as the award, standard or agreed hours of work paid for at the ordinary rate. Ordinary hours paid for include: stand-by or reporting time hours which are part of standard hours of work, and hours of paid annual leave, paid sick leave and long service leave taken during the reference period. Ordinary time hours paid for at penalty rates (e.g. for shift work) are not converted to their ordinary time equivalent; and
- overtime hours paid for - defined as hours paid for in excess of award, standard or agreed hours of work, at both standard and penalty rates.

Measures of average (mean) and median hours paid for and average hourly earnings are available from both EEH and COE.

Normal hours of work

Normal hours of work is defined in a 2008 ICLS resolution as "the hours fixed by or in pursuance of laws or regulations, collective agreements or arbitral awards to be performed in specified paid-employment jobs over a specified reference period, such as per day, week, month or year (within the System of National Accounts production boundary). Normal hours of work may also apply to a job in self-employment when the hours are in accordance with the hours fixed for all jobs in a specific industry or occupation (such as for drivers to ensure public safety)".

Measures of normal hours of work are not produced by the ABS. However, the concept is used to assist in allocating respondents in the full-time/part-time status classification in ABS business surveys.

Data sources

Labour Force Survey

The main source of hours worked data is the LFS. The list of hours worked data items from the LFS, and the publications they are contained in, are provided in [Labour Force Survey Standard Products and Data Item Guide \(/statistics/standards/labour-force-survey-standard-products-and-data-item-guide/jun-2016\)](#).

LFS supplementary surveys

Hours worked data for specific populations are available in [Participation, Job Search and Mobility, Australia \(/statistics/labour/employment-and-unemployment/participation-job-search-and-mobility-australia/latest-release\)](#).

The sole source of hours paid for from ABS household surveys is [Characteristics of Employment, Australia \(/statistics/labour/earnings-and-work-hours/characteristics-employment-australia/latest-release\)](#).

Other ABS sources

Measures of total hours worked, over a quarter, are available from the Australian Labour Account. The Labour Account provides the best measure of hours worked across industries.

Measures of hours paid for are collected from business payroll records in Employee Earnings and Hours. This survey provides statistics on the composition and distribution of employee earnings, hours paid for and methods used to set employees' pay in Australia.

The Census of Population and Housing has data on the number of hours worked by an employed person in all jobs during the week prior to Census night. Hours worked data are generally published in ranges, but are also available for individual numbers of hours worked.

Unemployment

Concepts and international guidelines

Unemployed people are defined as all those of working age who were not in employment, carried out activities to seek employment during a specified recent period and were currently available to take up employment given a job opportunity.

[Nineteenth International Conference of Labour Statisticians \(ICLS\) 2013 \(http://ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_230304.pdf\)](http://ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_230304.pdf)

Not in employment

'Not in employment' is assessed with respect to the short reference period for the measurement of employment. The purpose of the 'not in employment' criterion is to ensure that employment and unemployment are mutually exclusive. As precedence is given to employment, a person should only be classified as unemployed if they do not satisfy the criteria for employment. The not in employment criterion refers to a total lack of work, that is, not in paid employment or self-employment, as defined in international standards for employment. People who are 'without work' should not have undertaken any work at all (not even for one hour) during the reference period, nor should they have been temporarily absent from a job to which they have a formal attachment.

Seeking employment

Seeking employment refers to any activity when carried out, during a specified recent period comprising the last four weeks or one month, for the purpose of finding a job or setting up a business or agricultural undertaking.

[Nineteenth International Conference of Labour Statisticians \(ICLS\) 2013 \(http://ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_230304.pdf\)](http://ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_230304.pdf)

According to the international guidelines seeking employment includes also part-time, informal, temporary, seasonal or casual employment, within the national territory or abroad. Examples of such activities are: "arranging for financial resources, applying for permits, licences; looking for land, premises, machinery, supplies, farming inputs; seeking the assistance of friends, relatives or other types of intermediaries; registering with or contacting public or private employment services; applying to employers directly, checking at worksites, farms, factory gates, markets or other assembly places; placing or answering newspaper or online job advertisements; placing or updating resumes on professional or social networking sites online, etc." ([Nineteenth International Conference of Labour Statisticians \(ICLS\) 2013 \(http://ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_230304.pdf\)](http://ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_230304.pdf)).

To ensure that unemployment serves as a measure of current labour market performance that can capture short-term changes in labour market absorption, a 'specified recent period' is used to capture activities to seek employment. It is intended to be interpreted as a longer period than the reference day or week, in order to account for the time-lags that often follow initial steps to seek employment, during which jobseekers may choose not to take any other steps to find employment.

The international guidelines note that to be considered undertaking an active job search, a person must have done something specific to obtain work before being classified as 'seeking work'. A general declaration of being in search of work is not sufficient.

The active job search criterion is waived for persons waiting to start a new job that they have already obtained and that is to begin after the end of the reference period (these persons are referred to as future starters). According to the international standards, future starters are defined as persons 'not in employment' and 'currently available' who did not 'seek employment', because they had already made arrangements to start a job within a short subsequent period, set according to the general length of waiting time for starting a new job in the national context but generally not greater than three months. The active search criterion is waived; having already secured employment, persons waiting to take up a job may not feel the need to look for work. The international guidelines consider that this group should be treated as unemployed rather than employed because, since they are available to start work, such persons would presumably have started work had the job begun earlier and, as such, this group forms part of currently underutilised labour resources.

The international guidelines recommend that countries develop classifications of persons not in the labour force, according to the relative strength of their attachment to the labour market. Persons with marginal attachment include those persons who are not in the labour force, who wanted to work but were not actively looking for work, and were available to start work within four weeks from the end of the reference period.

Currently available for employment

Persons without employment who are seeking employment should also be available for employment if they are to be considered as unemployed.

[Nineteenth International Conference of Labour Statisticians \(ICLS\) 2013 \(http://ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_230304.pdf\)](http://ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_230304.pdf)

In this context, availability for employment is a test of readiness to start a job in the present, assessed with respect to a short reference period comprising that used to measure employment: depending on national circumstances, the reference period may be extended to include a short subsequent period not exceeding two weeks in total, so as to ensure adequate coverage of unemployment situations among different population groups. The international standards recommend that a slightly longer reference period of measurement than the reference week would be better suited to capturing situations of unemployment among different population subgroups. Reasons for choosing a longer reference period include: the fact that not everyone who is seeking work can be expected to take up a job immediately when one is offered; and the fact that there are some forms of employment where workers are employed on a pay period basis and have to wait until a new pay period starts before taking up work.

The international guidelines recommend that countries develop classifications of persons not in the labour force according to the relative strength of their attachment to the labour market. Persons with marginal attachment include those persons who are not in the labour force, who wanted to work and had actively looked for work (in the four weeks up to the end of the survey reference week), but did not meet the availability criterion to be classified as unemployed.

Definitions used in ABS surveys

The ABS produces estimates of unemployment from most household surveys. The LFS is designed to produce estimates of unemployment (and employment), and the definition used aligns closely with the international definitions outlined above. In other household surveys, where unemployment is an explanatory or classificatory variable, unemployment is less precise than that used in the LFS.

Labour Force Survey

Unemployed people are defined as all persons aged 15 years and over who were not employed during the reference week, and:

- had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week, and were available for work in the reference week, or
- were waiting to start a new job within four weeks from the end of the reference week, and could have started in the reference week if the job had been available then.

'Actively looked for work' includes: written, telephoned or applied to an employer; had an interview with an employer for work; answered an advertisement for a job; checked or registered with an employment agency; taken steps to purchase or start your own business; advertised or tendered for work; and contacted friends or relatives to find work.

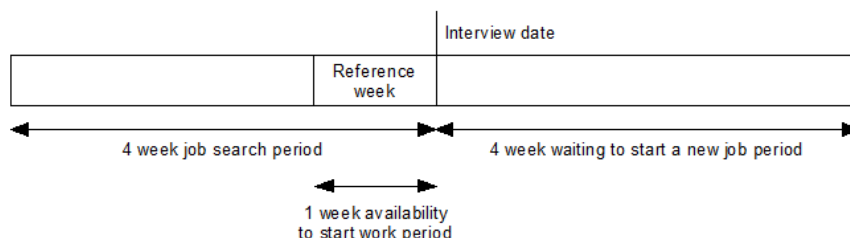
People who only looked in newspapers or at job advertisements on the internet are seen as passively, rather than actively, looking for work and so are not considered unemployed. Similarly, just checking noticeboards is not considered an active job search step. These steps in isolation do not meet the active search criterion, as it is impossible to obtain work by looking at a job advertisement without some additional, active, job search step (for example, contacting the employer).

Future starters are those persons who were not employed during the reference week, were waiting to start a job within four weeks from the end of the reference week, and could have started in the reference week if the job had been available then. As described above, under International Labour Organisation (ILO) guidelines, future starters do not have to be actively looking for work in order to be classified as unemployed. Until February 2004, the Labour Force Survey definition of unemployed only included the subset of future starters who had actively looked for work in the four weeks to the end of the reference week. Hence, the Labour Force Survey treatment of future starters was not fully consistent with the ILO standards, as the precondition of active job search was not waived meaning some future starters were defined as 'not in the labour force'.

From February 2004, future starters who had not actively looked for work are classified as unemployed in the Labour Force Survey, in line with ILO guidelines. Labour Force Survey estimates were revised back to April 2001 to reflect this change. This revision created a small trend break at April 2001 in unemployed persons and unemployment rate series. For further information on this change, see pages 11 and 12 of [Information Paper: Forthcoming Changes to Labour Force Statistics, 2003 or Labour Force, Australia, Feb 2004](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/B71E8D17E6993BE1CA2572DF00150A31?opendocument) (<https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/B71E8D17E6993BE1CA2572DF00150A31?opendocument>).

Different reference periods apply for defining not employed, availability to start work, job search, and waiting to start a new job. The short, one week reference period ('reference week') is used in defining those 'not employed', and in determining their availability for work, in accordance with the international guidelines. For active job search, a longer (four week) period that includes the reference week is applied. For future starters, a period of four weeks is used for the waiting period beyond the reference week in which the job will commence.

Reference Periods Used in the Labour Force Survey for Determining Unemployment



Outlines the reference periods used in the Labour Force Survey for determining unemployment. Different reference periods are applied for defining not employed, availability to start work, job search, and waiting to start a new job. The short, one week reference period ('reference week') is used in defining those 'not employed', and in determining their availability to work. For active job search, a longer four week period that includes the reference week is applied. For future starters, a period of four weeks is used for the waiting period beyond the reference week in which the job will commence.

Other ABS household surveys

To produce unemployment estimates, most other ABS household surveys use one of the two alternative questionnaire modules: the reduced questionnaire module (used for personal interviews); or the self-enumerated questionnaire module. As discussed above, unemployment is defined less precisely in these modules than in the LFS.

Most Special Social Surveys use the reduced questionnaire module for personal interviews. Unemployment in this module is defined as persons aged 15 years and over who were not employed during the reference week, had actively looked for work and were available to start work. Compared with estimates of unemployment from the LFS, the reduced questionnaire module for personal interviews results in lower estimates of unemployment. This arises from the simplified treatment of certain categories of persons:

- the reduced questionnaire module for personal interviews does not ask respondents about the reasons they did not actively look for work. Therefore, the reduced questionnaire module does not identify those 'future starters' who had not actively looked for. When the reduced questionnaire module is used, these 'future starters' are classified as not in the labour force rather than as unemployed; and
- in the LFS, persons on workers' compensation 'last week' and not returning (or who do not know if they will be returning) to work, and persons away from work for four weeks or more without pay, are classified as either unemployed or not in the labour force. Where the

reduced questionnaire module is used, all persons absent from work, but who usually work one hour or more a week, are classified as employed.

The self-enumerated questionnaire module used in the Census of Population and Housing also produces different estimates of unemployment when compared to the LFS. Some differences result from the shortened set of questions, which cannot determine unemployment as precisely as the LFS. Other differences result from the self-enumeration nature of the questions and the inevitable differences in interpretation among respondents. As a result, estimates of unemployment from the self-enumerated questionnaire module are best used as explanatory or classificatory variables to explain other phenomena, rather than for detailed analysis of the labour force itself.

Data sources

Unemployment estimates are available from:

- the Labour Force Survey (LFS)
- the Participation, Job Search and Mobility Survey (PJSM)
- Labour Account
- the Census of Population and Housing
- Special Social Surveys

Labour Force Survey (LFS)

The LFS is the official source of Australian employment and unemployment statistics. The definition of unemployment used in the LFS is outlined above. The LFS uses a comprehensive and detailed set of questions to precisely measure the numbers and selected characteristics of persons in employment and unemployment, as well as persons who are not currently economically active. Estimates from the LFS are available by State/Territory, Capital City/Rest of State, and for LFS regions.

Participation, Job Search and Mobility (PJSM)

The supplement to the LFS, the PJSM Survey, defines unemployment in the same way as the LFS, but excludes persons living in Aboriginal and Torres Strait Islander communities in very remote parts of Australia. The exclusion of these persons will have only a minor impact on any aggregate estimates that are produced for individual states and territories, except the Northern Territory where such persons account for around a quarter of the population.

Census of Population and Housing

The self-enumerated questionnaire module defines unemployment less precisely than the LFS, and the estimates produced are not strictly comparable with those from the LFS. For this reason, unemployment estimates from the Census should be used with caution in analyses where labour force activities are a major focus. When comparing estimates of unemployment from the Census of Population and Housing with those produced from the LFS, users should also note differences between the two surveys in scope (for example, the inclusion of permanent defence forces in Census employment data) and methodology.

Special Social Surveys

As the reduced questionnaire module defines unemployment less precisely than the LFS, estimates produced are not strictly comparable with those from the LFS. When comparing estimates from the Special Social Surveys with those from the LFS, users should also note differences in scope and methodology across the collections.

Unlike most Special Social Surveys, the Survey of Employment Arrangements, Retirement and Superannuation, and the Survey of Employment and Unemployment Patterns, did not use the reduced questionnaire module to produce measures of unemployment as described above. Instead, these surveys used the full set of questions asked in the LFS.

Measures of unemployment

Unemployment rate

The unemployment rate for any group is defined as the number of unemployed persons expressed as a percentage of the labour force (employed plus unemployed). As one measure of the proportion of the labour force that is underutilised, an important use is as an indicator of the performance of the economy. A high rate of unemployment indicates limited employment opportunities in a labour market that is oversupplied. A low rate of unemployment indicates a tight labour market, a potential scarcity of skilled labour, and future cost pressures from wage demands from workers.

The trend over time in the overall unemployment rate serves as an indicator of the performance of the economy, while the unemployment rate for different groups of persons (e.g. younger persons, older persons, and women) identifies areas of social concern when rates for some groups are much higher than for others.

Duration of job search

Conceptually, duration of job search is the period of time during which a person who is currently unemployed has been in a continuous state of unemployment. To measure this period accurately would require that all three criteria for defining an unemployed person be satisfied continuously and simultaneously over the whole period (i.e. without paid work, actively looking for work and available to commence work). However, it is impractical to apply all three criteria to past periods in a household survey because of the lengthy and complex questioning needed to test for the criteria, and the memory recall difficulties of respondents. For this reason, in practice the measurement of duration of unemployment focuses on the period of time that a person has been without paid work, and/or has been looking for work.

Duration of job search measures the elapsed number of weeks to the end of the reference week since a currently unemployed person began looking for work, or since that person last worked, whichever is the shorter. For persons who began looking for work while still employed, it is the period from the time the person last worked to the end of the reference week.

Long-term unemployment

Within unemployment, it is possible to identify persons who are in long-term unemployment, defined as having duration of unemployment of 12 months or more. The number of unemployed people is an important social and economic indicator. The length of time that currently unemployed people have been looking for work or since they last worked (previously referred to as duration of unemployment) is also important from both an economic and social perspective. Long-term unemployment (i.e. where duration of job search is 52 weeks or more) is of particular social concern due to the consequences of being out of work for long periods, such as financial hardship and the loss of relevant skills. From an economic perspective, the longer people are unemployed the less likely they are going to be able to contribute to the economy.

Since its inception in 1960, the ABS Labour Force Survey (LFS) has collected information about duration of unemployment for unemployed persons. The survey collects data each month about the length, in completed weeks, of current (incomplete) spells of looking for work and/or time since last job from those who are currently unemployed.

Duration of unemployment refers to the amount of time that an unemployed person has not been employed. Over an extended period an unemployed person may have changes in their availability or active job search behaviour, with a spell or multiple spells of being not in the labour force.

The definition used by the ABS aligns with international standards (19th ICLS resolution (2013) concerning statistics of work, employment and labour underutilisation).

Underutilised labour

In a broad sense, labour underutilisation encapsulates the extent to which people's desire for work is not being met. It covers people who are not working but want to work, and those who are working but want to work more. A measure of underemployment supplements other measures of underutilisation of labour, such as the number of unemployed people and the number of marginally attached discouraged jobseekers, to inform the community about the performance of the labour market. In conceptual terms, underemployment, unemployment and marginal attachment to the labour force all measure different aspects of labour underutilisation. In isolation these measures provide important contextual information about the degree to which labour is being underutilised.

Concepts and international guidelines

Underutilised labour

Underutilisation measures provide more comprehensive information on the state of the labour market, and measures the extent to which all available labour force resources are not being fully used in the economy.

The need to produce broader measures of underutilisation reflects the need to provide more comprehensive information than merely the unemployment rate¹. The unemployment rate is often one of the most cited indicators of underutilisation within the labour market. However, the standard definition used to define unemployment is necessarily quite restrictive. Consequently, the unemployment rate gives a relatively narrow view of the degree to which labour is being underutilised in the labour market. The production of broader measures of underutilisation is intended to provide a more comprehensive view of the labour market.

While these specific measures provide important information about labour underutilisation, individually they are narrow and in isolation do not provide a comprehensive picture of the degree to which labour is being underutilised in the labour market as a whole. By bringing various measures together, a broader picture of the degree to which labour is being underutilised can be obtained.

The labour force underutilisation rate and the extended labour force underutilisation rate are both aggregate measures that provide a broader picture of labour underutilisation.

Underemployment

Underemployment is defined by the International Labour Organization (ILO) as the underutilisation of the productive capacity of the employed population.

It describes a situation where the potential labour of employed people is not fully utilised. Along with unemployment, it is an important indicator of unused capacity given current labour market conditions.

Two related concepts are recognised in the current international standards when measuring underemployment: time-related underemployment, which reflects insufficient hours of work in relation to an alternative employment situation that a person is willing and available to engage in; and inadequate employment situations, which refers to all those in employment who want to change their work activities and/or work environment for a set of reasons chosen according to national circumstances. Such reasons might include: insufficient use and mismatch of skills and experience; inadequate income; and excessive hours of work. Employed persons may be simultaneously in time-related underemployment and inadequate employment situations.

Previous international standards on underemployment identified two concepts of underemployment: one reflecting an insufficient volume of work, referred to as visible underemployment; and one reflecting an insufficient use of skills and experience or low productivity, termed invisible underemployment. Visible underemployment is closely related to time-related underemployment, while invisible underemployment, as it was previously defined, is now one component of inadequate employment situations.

Time-related underemployment

According to the international standard, time-related underemployment exists when the hours of work of an employed person are below a threshold, and are insufficient in relation to an alternative employment situation in which the person is willing and available to engage ([Nineteenth International Conference of Labour Statisticians 2013 \(http://ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_230304.pdf\)](http://ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_230304.pdf)). The table below sets out the international definition for time-related underemployment.

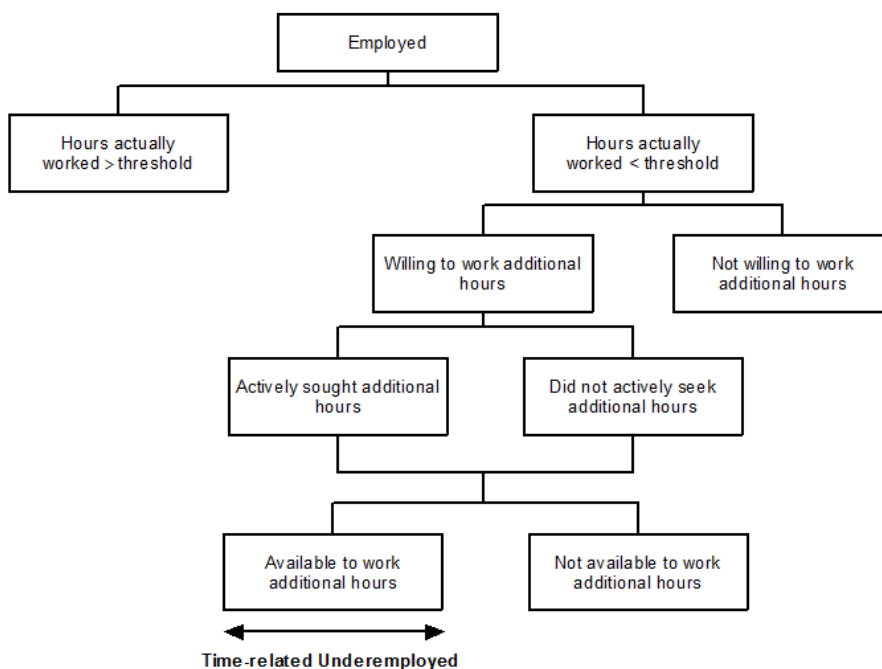
International Definition of Time-Related Underemployment (ICLS 2013)

Persons in time-related underemployment are defined as all persons in employment who, during a short reference period, wanted to work additional hours, whose working time in all jobs was less than a specified hours threshold, and who were available to work additional hours given an opportunity for more work, where:

- The working time concept is hours actually worked or hours usually worked, dependent on the measurement objective (short or long-term situations) and in accordance with the international statistical standards on the topic.
- Additional hours may be hours in the same job, in an additional job(s) or in a replacement job(s).
- The hours threshold is based on the boundary between full-time and part-time employment, on the median or modal values of the hours usually worked of all persons in employment, or on working time norms as specified in relevant legislation or national practice, and set for specific worker groups.
- Available for additional hours should be established in reference to a set short reference period that reflects the typical length of time required in the national context between leaving one job and starting another.

The concepts underpinning the international definition of time-related underemployment are shown in the framework below. The framework classifies persons who satisfy each of the criteria outlined above - willingness to work additional hours (note that persons actively seeking additional hours of work are distinguished from those who are not); availability to work additional hours; and worked less than a threshold relating to working time - as time-related underemployed.

Conceptual Framework: Time-Related Underemployment



The Conceptual Framework for Time-Related Underemployment. Persons in time related underemployment are defined as all persons in employment who, during a short reference period, wanted to work additional hours, whose working time in all jobs was less than a specified hours threshold, and who were available to work additional hours given an opportunity for more work.

Among persons in time-related underemployment, depending on the working time concept applied (i.e. who wanted and were “available” to work “additional hours”), it is possible to identify the following groups:

- persons whose hours usually and actually worked were below the “hours threshold”;
- persons whose hours usually worked were below the “hours threshold”, but whose hours actually worked were above the threshold; and
- persons “not at work”, or whose hours actually worked were below the “hours threshold” due to economic reasons (e.g. a reduction in economic activity, including temporary lay-off and slack work, or the effect of the low or off season).

The current international standard (ICLS 2013) also notes that countries should include, as part of a broad set of statistical indicators, the following in relation to underutilised labour:

- the rate of volume of time-related underemployment;
- activities to “seek employment” by persons in employment, indicating pressure on the labour market;
- inadequate employment situations due to skills, income or excessive working time, according to the relevant international statistical standards;
- slack work among the self-employed; and
- gross labour market flows between labour force statuses and within employment.

Measures of labour underutilisation

Labour underutilisation measures can be divided into two broad types of measurements: headcount measures and volume measures. Headcount measures of labour underutilisation are based on the number of persons who are underemployed, unemployed or marginally attached to the labour force. Volume underutilisation measures relate to the number of potential hours of labour that are not utilised. Whether persons are unemployed or underemployed, not all persons who are in search of work (or more work) are seeking the same number of hours of work. For this reason, volume measures of underutilisation are often more relevant for analysing the spare capacity of the labour force than headcount measures. The various labour underutilisation measures that the ABS produces are discussed below.

Unemployed

Measures of unemployment provide important information on the supply of labour that is immediately available from persons who are currently not employed. The ABS produces both headcount and volume measures of unemployment. The unemployment rate is the number of persons that are unemployed, expressed as a percentage of the labour force. The volume unemployment rate is the hours of labour sought by unemployed persons, expressed as a percentage of the potential hours in the labour force. Total potential hours in the labour force is comprised of the number of hours sought by the unemployed, the number of additional hours sought by the underemployed, and the number of hours usually worked by all employed persons.

Underemployed

Measures of underemployment provide important information on the degree to which labour is being underutilised in the employed population of the labour market. The ABS produces both headcount (by population) and volume (hours based) measures of underemployment. The underemployment rate is the number of underemployed workers, expressed as a percentage of the labour force. The volume underemployment rate is the additional hours of labour preferred by underemployed workers, expressed as a percentage of the potential hours in the labour force.

Definitions used in ABS surveys

Underemployment – Measurement and scope

Underemployed workers are employed people who would prefer, and are available for, more hours of work than they currently have. They comprise:

- part-time workers who would prefer to work more hours and were available to start work with more hours, either in the reference week or in the four weeks subsequent to the survey; and
- full-time workers who worked part-time hours in the reference week for economic reasons (such as being stood down or insufficient work being available). It is assumed that these people would prefer to work full-time in the reference week and would have been available to do so.

For practical reasons, ABS measurement of underemployment is confined to time-related underemployment. The ABS underemployment framework is based on separating employed persons into two mutually exclusive groups:

- workers who are considered to be fully employed; and
- workers who are not fully employed.

Fully employed workers comprise:

- employed persons who worked full-time during the reference week (including persons who usually work part-time);
- employed persons who usually work full-time, but worked part-time in the reference week for non-economic reasons (including illness or injury, leave, holiday or flex time, and personal reasons); and

- part-time workers (who usually work part-time and did so in the reference week) who do not want to work additional hours.

Full-time workers who worked part-time in the reference week for non-economic reasons are considered to be fully employed because they usually work full-time, and worked part-time in the reference week voluntarily.

Persons who are not fully employed comprise:

- part-time workers (who usually work part-time and did so in the reference week) who want to work more hours; and
- full-time workers who worked part-time in the reference week for economic reasons (such as being stood down or insufficient work being available).

Time-related underemployed workers (as defined in the ILO guidelines) are a subgroup of persons 'not fully employed'.

The ABS underemployment framework further classifies persons who are not fully employed according to whether they were looking for and/or available to start work with more hours and according to the number of additional hours sought. The framework further defines workers who are underemployed, comprising:

- part-time workers who would prefer to work more hours and were available to start work with more hours, either in the reference week or in the four weeks following the survey; and
- full-time workers who worked part-time hours in the reference week for economic reasons (such as being stood down or insufficient work being available).

Underemployment – Expanded analytical series

As a result of the implementation of the Outcomes of the Labour Household Surveys Content Review, 2012 (cat. no. 6107), the ABS also publishes an analytical series which expands the scope of headline underemployment measures to include all employed persons.

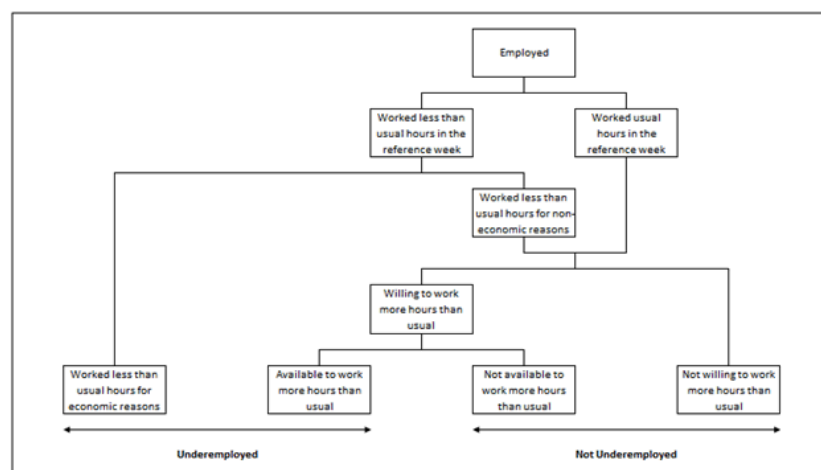
Headline measures of underemployment include those persons who are employed part-time who are wanting, and available, to work more hours. The expanded analytical underemployment series includes all employed persons who want, and are available, to work more hours, and all employed persons whose actual hours were fewer than usual hours for economic reasons.

The following additional groups are therefore included in the expanded analytical measures of underemployment:

- full-time workers who would prefer to work more hours and were available to start work with more hours, either in the reference week or in the four weeks following the survey;
- full-time workers who still worked full-time hours in the reference week, but worked less than their usual full-time hours for economic reasons (such as being stood down or insufficient work being available); and
- part-time workers who worked less than their usual part-time hours during the reference week for economic reasons.

The ABS framework for the expanded analytical underemployment series is shown below.

ABS Framework: Expanded analytical underemployment series



The ABS Framework for the expanded analytical underemployment series has been created to include all employed persons. Headline measures of underemployment include those persons who are employed part-time who are wanting, and available, to work more hours. The expanded analytical underemployment series includes all persons who want, and are available to work more hours, and all employed persons whose actual hours were fewer than usual hours for economic reasons.

Underutilisation rate

The labour force underutilisation rate is defined as the sum of the number of persons unemployed and underemployed, expressed as a percentage of the labour force.

The labour force underutilisation rate is an aggregate measure of underutilisation. It can also be viewed as the sum of the unemployment rate and the underemployment rate.

The labour force underutilisation rate is also expressed as a volume measure in the volume labour force underutilisation rate. The volume labour force underutilisation rate is expressed as the total volume of underutilised labour in the labour force (hours sought by unemployed persons, plus additional hours preferred by underemployed persons), as a percentage of the potential hours in the labour force.

The extended labour force underutilisation rate is expressed as the sum of the unemployed, the expanded analytical measures of underemployment and two marginally attached groups, as a proportion of the augmented labour force (including the number of people in three marginally attached groups).

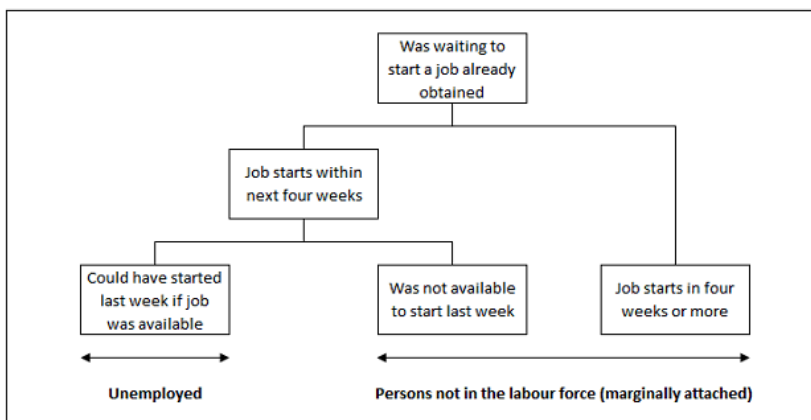
The extended labour force underutilisation rate is the broadest measure of underutilisation the ABS currently produces, and takes the measure of underutilised labour beyond what is conventionally measured in the labour force. The measure includes, in addition to the unemployed and the expanded measures of underemployed, two groups of persons with marginal attachment to the labour force:

- persons actively looking for work, who were not available to start work in the reference week, but were available to start work within four weeks, and
- discouraged job seekers, defined as persons who want to work and could start work within four weeks if offered a job, but who have given up looking for work for reasons associated with the labour market.

When measuring the extended underutilisation rate as a proportion, the extended measure of the total labour force is augmented by the two marginally attached groups above plus a third group – persons who had a job to go to. This marginally attached group covers all people who were attached to a job, but were not classed as either employed or unemployed, including:

- persons who had accepted a job offer but had not yet started working. These people are similar to unemployed future starters, however they were not classed as unemployed, because either they were not starting their job within the following four weeks, or they were not available to start in the reference week, had been available.
- persons who were on workers compensation or on leave from their jobs without pay and were planning to return to work at a later date in the future. This includes people who were available to return in the following four weeks and also people who weren't available until four weeks or later.

ABS Framework: Waiting to start a job already obtained



The ABS framework for waiting to start a job already obtained. Persons are not considered in the labour force (marginally attached) if the job starts in four weeks or more or if the job starts within the next four weeks and the person was not available to start last week. A person is considered unemployed if the job starts within the next four weeks and they could have started last week if the job was available.

The population with marginal attachment to the labour force is a relatively large and heterogeneous group. It includes persons who may have a strong likelihood of joining the labour force in the near future, as well as some who have little or no commitment to finding employment. The ABS does provide statistics about this large and diverse group, but does not include the whole group in its broadest supplementary measure of labour underutilisation. There may be other subgroups (in addition to the two marginally attached groups identified above) which fit the requirements of underutilised labour resources.

Comparison of ABS and international definitions

The ABS underemployment framework is consistent with the ILO concept of time-related underemployment, although the international standards do not specifically identify the group 'fully employed workers' as is the case in the ABS framework.

Worked less than a threshold relating to working time

The international definition of time-related underemployment includes a threshold relating to working time. Only persons actually working less than the threshold are included in statistics of time-related underemployment. The international standards do not specify the threshold to be used. Instead they suggest a number of alternative approaches which may be suitable.

The threshold used in the current ABS underemployment framework is based on the boundary between full-time and part-time work. Only those employed persons actually working less than 35 hours in the reference week may be further classified as not fully employed.

Persons actually working less than 35 hours in the reference week include part-time workers (persons who usually work part-time and did so in the reference week), as well as some full-time workers who actually worked part-time hours in the reference week for non-economic reasons.

Only full-time workers who worked part-time in the reference week for economic reasons are classified as not fully employed in the current ABS framework. Those who worked part-time in the reference week for non-economic reasons are assumed to be fully employed, on the basis that they usually work full-time, and that they 'voluntarily' worked part-time in the reference week.

In the case of the expanded analytical measures of underemployment, the threshold used to determine underemployment is usual hours. This threshold is variable and specific to each individual based on their usual working patterns. The variable threshold broadens the measure to encompass more circumstances of time-related underemployment.

Willingness to work additional hours

In the ABS framework, willingness to work additional hours is tested by asking part-time workers whether they want to work additional hours. Starting from the July 2014 reference month, all employees are asked whether they want to work additional hours. This additional information allows for the production of the expanded analytical underemployment series.

Availability to work additional hours

In the ABS framework, availability to work additional hours is determined both in terms of immediate availability (i.e. available in the reference week), and availability within the following four weeks. The international guidelines are not prescriptive on this issue.

Volume of time-related underemployment

The ABS previously produced annual volume measures of underemployment and underutilisation. Volume measures relate to the quantum of unused potential hours of labour, and were previously compiled using information collected in the Job Search Experience Survey, the Underemployed Workers Survey and the Labour Force Survey (LFS). They are often more relevant for analysing the spare capacity of the labour force than the usual 'headcount' measures, as they take into account the number of hours sought and additional hours preferred by individuals.

Starting from the July 2014 reference month of the LFS, the ABS increased the frequency of the volume measures of labour underutilisation from an annual to a quarterly basis, estimated directly from LFS data. These data were made available from November 2015. For more information, see [Information Paper: Forthcoming Changes to Labour Force Statistics, Oct 2014](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/A8F931AC3584272ECA257E5200194DB3?opendocument). (<https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/A8F931AC3584272ECA257E5200194DB3?opendocument>)

Data sources

Estimates of labour unemployment, underemployment and underutilisation are available monthly from Labour Force, Australia:

- underemployment (headcount);
- unemployment (headcount);
- unemployment rate; and
- underutilisation rate.

Estimates of persons not fully employed are available from:

- the Labour Force Survey (LFS); and
- the supplement to the LFS, the Participation, Job Search and Mobility (PJSM) Survey.

Labour Force Survey

The LFS collects information on underemployment on a monthly basis. The survey classifies workers according to the framework outlined above:

- part-time workers who would prefer to work more hours and were available to start work with more hours, either in the reference week or in the four weeks following the survey; and
- full-time workers who worked part-time hours in the reference week for economic reasons.

Based on the new survey starting with the July 2014 reference month, the ABS increased the reporting frequency of the underemployment rate and labour force underutilisation rate from a quarterly to a monthly basis. The underemployment and underutilisation information was integrated into LFS output, together with unemployment information, from November 2015. For more information, see Labour Force, Australia, Nov 2015 and [Information Paper: Forthcoming Changes to Labour Force Statistics, Oct 2014](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/A8F931AC3584272ECA257E5200194DB3?opendocument) (<https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/A8F931AC3584272ECA257E5200194DB3?opendocument>).

In addition to monthly headcount underemployment and underutilisation measures, the ABS produces volume measures of underemployment and underutilisation on a quarterly basis.

For more information on the content and methodology of the LFS, see the section : Labour Force Survey.

Participation, Job Search and Mobility (PJSM)

The annual LFS supplementary topic, PJSM, is the primary ABS data source on underemployment. The survey classifies workers according to the framework outlined above, comparable with ICLS 2013 and the LFS quarterly measure, but with a much wider range of information: for example, on the steps taken to find work, and difficulties finding work. For more information on the content and methodology of this survey, see the relevant section: Participation, Job Search and Mobility.

Footnotes

1. 'Beyond the measurement of unemployment and underemployment; The case for extending and amending labour market statistics', International Labour Organisation (ILO) Underutilisation Working Group Report (2011).

Not in the labour force

Concepts and international guidelines

The population not in the labour force (that is, not currently economically active) comprises all persons not currently employed or unemployed, irrespective of age.

[Thirteenth International Conference of Labour Statisticians 1982 \(http://www.ilo.org/public/english/bureau/stat/download/res/ecacpop.pdf\)](http://www.ilo.org/public/english/bureau/stat/download/res/ecacpop.pdf)

Theoretically, then, persons not in the labour force include those below the age specified for measuring the economically active population. The international standards recognise that, for analytical purposes, the economically active population may be related to the total population to derive a crude participation rate or, more appropriately, to the population above the age prescribed for the measurement of the economically active population. In practice, many countries restrict the population scope of household surveys, and provide separately sourced estimates for those below the age limit when a total population estimate or a crude participation rate is required (e.g. for international reporting).

In the international guidelines ([Nineteenth International Conference of Labour Statisticians 2013 \(http://ilo.org/wcmsp5/groups/public/-/dgreports/-/stat/documents/normativeinstrument/wcms_230304.pdf\)](http://ilo.org/wcmsp5/groups/public/-/dgreports/-/stat/documents/normativeinstrument/wcms_230304.pdf)), the national system of work statistics will cover the work activities of the population in all age groups. To service different policy concerns, separate statistics are needed for the working age population.

To determine the working age population:

- the lower age limit should be set taking into consideration the minimum age for employment and exceptions specified in national laws or regulations, or the age of completion of compulsory schooling; and
- no upper age limit should be set, so as to permit comprehensive coverage of work activities of the adult population and to examine transitions between employment and retirement.

Not all persons who are classified as not in the labour force are voluntarily economically inactive; some want to work but are classified as not in the labour force because they do not satisfy the criteria for unemployment (active job search and availability to start work - see the section: Unemployment).

The international guidelines ([Thirteenth International Conference of Labour Statisticians 1982 \(http://www.ilo.org/public/english/bureau/stat/download/res/ecacpop.pdf\)](http://www.ilo.org/public/english/bureau/stat/download/res/ecacpop.pdf)) recommend that persons not in the labour force may be classified by reasons for inactivity, which are listed as:

- attendance at educational institutions;
- engagement in household duties;
- retirement or old age; and
- other reasons such as infirmity or disablement.

Marginal attachment to the labour force

The international guidelines ([Thirteenth International Conference of Labour Statisticians 1982 \(http://www.ilo.org/public/english/bureau/stat/download/res/ecacpop.pdf\)](http://www.ilo.org/public/english/bureau/stat/download/res/ecacpop.pdf)) suggest that, where the standard definition of employment is used, countries develop classifications of persons not in the labour force according to the relative strength of attachment to the labour market. The International Labour Organisation, in its manual [Surveys of Economically Active Population, Employment, Unemployment and Underemployment \(http://www.ilo.org/stat/Publications/WCMS_215885/lang-en/index.htm\)](http://www.ilo.org/stat/Publications/WCMS_215885/lang-en/index.htm), states that persons marginally attached to the labour force are those not economically active under the standard definitions of employment and unemployment, but who, following a change in one of the standard definitions (of employment or unemployment, such as active job search or availability to start a job), would be reclassified as economically active.

Potential labour force (Entrants)

In the international guidelines ([Nineteenth International Conference of Labour Statisticians 2013 \(http://ilo.org/wcmsp5/groups/public\)](http://ilo.org/wcmsp5/groups/public)

[/---dgreports/---stat/documents/normativeinstrument/wcms_230304.pdf](#)), the potential labour force is defined as all persons of working age who, during the short reference period, were neither in employment nor in unemployment and:

- carried out activities to seek employment, were not currently available but would become available within a short subsequent period established in the light of national circumstances (unavailable jobseekers); or
- did not carry out activities to seek employment, but want employment and were currently available (available potential jobseekers).

Discouraged workers

The guidelines recognise that, though not precise in concept (nor defined in the international guidelines), the term 'discouraged workers' generally refers to persons who want a job and are currently available for work, but have given up any active job search because they believe they cannot find a job.

Discouraged job seekers

In the international guidelines ([Nineteenth International Conference of Labour Statisticians 2013](#) (http://ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_230304.pdf)), there are those who are currently available for work who did not seek employment for the following labour market-related reasons:

- personal reasons (own illness, disability, studies);
- family-related reasons (pregnancy, presence of small children, refusal by family);
- lack of transport;
- other sources of income (pensions, rents); and
- social exclusion.

Willing non-jobseekers

The guidelines ([Nineteenth International Conference of Labour Statisticians 2013](#) (http://ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_230304.pdf)) state that willing non-jobseekers are defined as persons not in employment who wanted employment, but did not seek employment and were not currently available. This group have an expressed interest in employment not included within the potential labour force, but relevant for social and gender analysis.

Definitions used in ABS surveys

The ABS produces estimates of persons not in the labour force in a number of household surveys. The definition used is consistent with the concepts outlined above except for persons aged less than 15 years, who are generally excluded from ABS measures of labour force status. Persons not in the labour force are therefore generally defined in ABS household collections as 'persons aged 15 years and over who are neither employed nor unemployed'. Examples of those not in the labour force includes persons who are:

- retired or voluntarily inactive;
- performing home duties or caring for children;
- attending an educational institution;
- experiencing a long-term health condition or disability;
- experiencing a short-term illness or injury;
- looking after an ill or disabled person;
- on a travel, holiday or leisure activity;
- working in an unpaid voluntary job;
- in institutions (hospitals, jails, sanatoriums, etc.);
- permanently unable to work; and
- members of contemplative religious orders.

Estimates of persons not in the labour force vary across different household surveys because of differences in the definitions of employment and unemployment used in these surveys, and the respective scope of these surveys. As discussed in preceding sections, the Labour Force Survey (LFS) is designed to produce precise estimates of employment, unemployment and persons not in the labour force, and definitions used align closely with international standards. In other household surveys, it is generally not practical to define employment and unemployment as precisely as in the LFS. Two alternative questionnaire modules are used to collect measures of labour force status (i.e. employment, unemployment and persons not in the labour force) in these surveys: the reduced questionnaire module (for use in personal interview), and the self-enumerated questionnaire module.

Estimates of persons not in the labour force produced from the reduced questionnaire module (used in most Special Social Surveys) are higher than those produced from the LFS. This is due to differences in the treatment of certain categories of persons:

- the reduced questionnaire module for personal interviews does not ask respondents about the reasons they did not actively look for work. Therefore, the reduced questionnaire module does not identify 'future starters'. Future starters are persons who were not employed during the reference week, were waiting to start a job within four weeks from the end of the reference week, and could have started in the reference week if the job had been available then. Using the reduced questionnaire module, such persons are classified as not in the labour force rather than as unemployed, and
- in the LFS, persons on workers' compensation 'last' week and not returning or 'don't know if returning' to work, and persons away from work for four weeks or more without pay, are classified as either unemployed or not in the labour force. Using the reduced

questionnaire module, all persons absent from work, but who usually work one hour or more a week, are classified as employed.

The self-enumerated questionnaire module (used in the Census of Population and Housing) also produces different estimates of persons not in the labour force when compared to the LFS. Some differences result from the shortened set of questions, which cannot determine labour force status as precisely as the LFS. Other differences result from the self-enumeration nature of the questions, and the inevitable differences in interpretation across respondents. As a result, estimates of persons not in the labour force from the self-enumerated questionnaire module are best used as explanatory or classificatory variables to explain other phenomena, rather than for detailed analysis of the labour force itself.

Marginal attachment to the labour force and discouraged job seekers

Measures of persons marginally attached to the labour force and discouraged job seekers are collected by the ABS annually in a supplementary survey to the LFS, the Participation, Job Search and Mobility Survey. Definitions used in this survey are outlined below.

Marginal attachment

Persons with marginal attachment to the labour force comprise those persons who are not in the labour force, and:

- wanted to work, are actively looking for work, but are not available to start work in the reference week; or
- are not actively looking for work, but wanted to work and are available to start work within four weeks; or
- are attached to a job, but are not currently working (either they have accepted a job offer but have not yet started work, are away from work on workers compensation, or are away from work without pay for four weeks or more).

This definition is consistent with that suggested by the international guidelines, and involves relaxing the criteria used to determine employed or unemployment in the LFS as follows:

- persons meeting the first set of criteria above (wanting to work, actively looking for work, not available to start work) would have been classified as unemployed if the unemployment criterion 'currently available for work' had been waived; and
- persons meeting the second set of criteria above (wanting to work, not actively looking for work, available to start within four weeks) would have been classified as unemployed if the unemployment criterion 'active job search' had been waived and the criterion 'currently available for work' had been relaxed to include the next four weeks. The circumstances that would permit people to start a job are likely to differ between persons in the labour force and those not in the labour force. Accordingly, a reference period of four weeks for the availability criterion is adopted, rather than current availability, as for the unemployed.
- persons meeting the third set of criteria (attached to a job but not currently working) would be classified as employed if they started or returned to work for at least 1 hour or more.

Discouraged job seekers

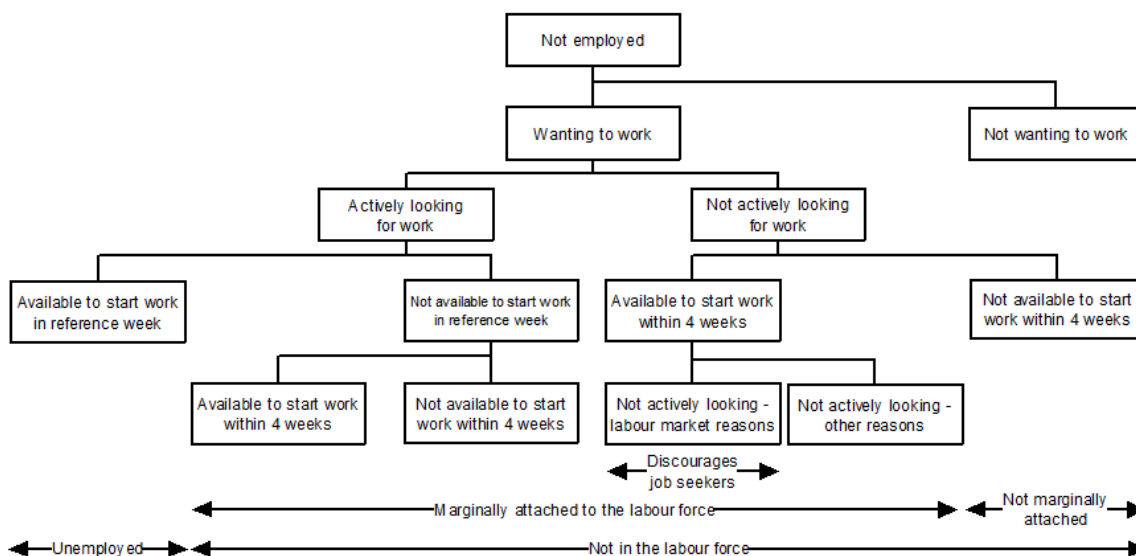
Discouraged job seekers are defined as persons with marginal attachment to the labour force who want to work and could start work within four weeks if offered a job, but who have given up looking for work for reasons associated with the labour market. This group includes persons who believe they would not find a job for any of the following reasons:

- considered to be too young or too old by employers;
- believes ill health or disability discourages employers;
- lacked necessary schooling, training, skills or experience;
- difficulties because of language or ethnic background;
- no jobs in their locality or line of work;
- no jobs in suitable hours; or
- no jobs available at all.

This definition of discouraged job seekers is consistent with the definition of discouraged workers outlined in international guidelines.

The diagram illustrates the concepts of not in the labour force, unemployed, marginally attached, and discouraged job seekers, as measured in the Participation, Job Search and Mobility (PJSM) Survey.

Conceptual Framework: Persons Not in the Labour Force



Outlines the conceptual framework used for determining persons not in the labour force. Persons not in the labour force are persons who were not in the categories employed or unemployed. They include people who undertook unpaid household duties or other voluntary work, were retired, voluntarily inactive and those permanently unable to work. The Participation, Job Search and Mobility (PJSM) Survey is one survey that collects information on persons not in the labour force, along with information on the unemployed, marginally attached and discouraged job seeker.

Data sources

Estimates of persons not in the labour force are available from:

- the Labour Force Survey (LFS);
- the Participation, Job Search and Mobility Survey (PJSM);
- the Census of Population and Housing; and
- Special Social Surveys.

Labour Force Survey (LFS)

The LFS is the official source for Australian employment and unemployment statistics and defines persons not in the labour force according to the definitions outlined above, using the full questionnaire module. Persons not in the labour force are further classified as:

- looking for work (i.e. either undertook active job search and were not available to commence work, or undertook only passive job search);
- not looking for work;
- permanently unable to work; and
- in institutions.

Estimates of reason for inactivity, marginal attachment and discouraged job seekers are impractical to collect in the LFS, because of cost, time and respondent burden. These topics are therefore measured in an annual supplement to the LFS, as noted below. Notwithstanding this, monthly estimates of the number of marginally attached persons who had actively looked for work, were not available to start work in the reference week, but were available to start within four weeks, are available from the LFS. For more details on the content and methodology of the LFS, refer to the section: Labour Force Survey.

Participation, Job Search and Mobility (PJSM)

The supplement to the LFS, the PJSM Survey, is the main source of detailed information on persons not in the labour force. Persons not in the labour force are defined as for the LFS, but exclude persons living in Aboriginal and Torres Strait Islander communities. The exclusion of these persons will have only a minor impact on any aggregate estimates that are produced for individual states and territories, except the Northern Territory where such persons account for around a quarter of the population. In addition, the supplementary surveys exclude institutionalised persons, and this group of persons represents approximately 4% of persons not in the labour force. The survey produces estimates of persons marginally attached to the labour force, of discouraged job seekers, and of persons not in the labour force classified by reasons for inactivity. The definitions for marginal attachment and discouraged job seekers used in the survey are discussed above. For further information on the content and methodology of the survey, refer to the section: Participation, Job Search and Mobility.

Census of Population and Housing

The Census of Population and Housing uses the self-enumerated questionnaire module and defines persons not in the labour force as 'persons aged 15 years and over who, during the week before census night, were neither employed nor unemployed'. As discussed previously, the self-enumerated questionnaire uses a limited set of questions to collect labour force status and measures persons not in the labour force more broadly than collections using the full questionnaire modules. The LFS and its supplementary topic PJSM both use

the full questionnaire. When comparing estimates from the Census with those from the LFS, or the PJSM Survey, users should also note differences in scope and methodologies across the collections. See the section: Census of Population and Housing for more information.

Special Social Surveys

The Special Social Surveys generally use the reduced questionnaire module and define persons not in the labour force as 'persons who were neither employed nor unemployed during the reference period'. Estimates are generally only produced for persons (in scope of the survey) aged 15 years and over. As discussed previously, the reduced questionnaire module uses a limited set of questions to determine labour force status, and measures 'not in the labour force' less precisely than collections using the full questionnaire modules, including the LFS and its supplementary topic PJSM. When comparing estimates from the Special Social Surveys with the LFS, or with PJSM, users should also note differences in scope and methodologies across the collections.

Job vacancies

Job vacancies are an indicator of unmet labour demand, and complement indicators of underutilised labour supply such as unemployment and underemployment. Job vacancy data are used by Commonwealth and State government departments, employer associations and trade unions as a leading economic indicator and for econometric forecasting.

Concepts and definitions

"A 'vacant post' can be said to exist if an employer before or during the reference period has taken concrete steps to find a suitable person to carry out a specific set of tasks and would have taken on (entered into a job contract with) such a person if she/he had been available during the reference period".

[International Labour Organisation, 15th ICLS, 1993 \(https://ilostat.ilo.org/about/standards/icls/\)](https://ilostat.ilo.org/about/standards/icls/)

There are currently no international recommendations or guidelines relating to job vacancies statistics. The concept of vacant post was discussed in the general report to the Fifteenth International Conference of Labour Statisticians 1993, where the above definition was put forward.

Job vacancies statistics are collected in the Australian Bureau of Statistics (ABS) Job Vacancies Survey (JVS). The ABS defines job vacancies in the JVS as employee jobs available for immediate filling on the actual survey reference day and for which employers have undertaken recruitment action. Recruitment action includes efforts to fill vacancies by advertising, by on site or online notices, by notifying employment agencies or trade unions and by contacting, interviewing or selecting applicants already registered with the enterprise or organisation.

Measures of job vacancies exclude:

- jobs not available for immediate filling on the survey reference day;
- jobs for which no recruitment action has been taken;
- jobs which became vacant on the survey reference day and were filled on the same day;
- jobs of less than one day's duration;
- jobs only available to be filled by internal applicants within an organisation;
- jobs to be filled by employees returning from paid or unpaid leave, or after industrial disputes;
- vacancies for work to be carried out by contractors; and
- jobs for which a person has been appointed but has not yet commenced duty.

Data sources

Data on job vacancies are available from the ABS, while data on the number of job advertisements are available from a number of other sources including the private sector. Job vacancies should not be confused with job advertisements. Job vacancies data may differ from data on the number of job advertisements for a number of reasons, including the multiple advertising of a single vacancy.

Estimates of job vacancies and job advertisements are available from:

- the ABS [Job Vacancies Survey \(/statistics/labour/employment-and-unemployment/job-vacancies-australia/latest-release\)](https://statistics/labour/employment-and-unemployment/job-vacancies-australia/latest-release)
- the [Australian and New Zealand Banking Group \(ANZ\) Job Advertisement Series \(https://www.media.anz.com/\)](https://www.media.anz.com/)
- the [SEEK Employment Index Report \(https://www.seek.com.au/about/news/seek-employment-reports/\)](https://www.seek.com.au/about/news/seek-employment-reports/)
- the [National Skills Commissions Vacancy Report \(https://lmip.gov.au/default.aspx?LMIP/VacancyReport\)](https://lmip.gov.au/default.aspx?LMIP/VacancyReport)

ABS Job Vacancies Survey

Estimates from this survey are produced according to the definitions outlined above. For more information on the data content and methodology of this survey see the [Job Vacancies, Australia methodology \(/methodologies/job-vacancies-australia-methodology/aug-2021\)](https://www.abs.gov.au/methodologies/job-vacancies-australia-methodology/aug-2021).

ANZ Job Advertisement Series

The ANZ produces a series of job advertisements based on counts of internet advertisements on selected employment internet sites. Readers should refer to the [ANZ Job Advertisement Series \(https://www.media.anz.com/\)](https://www.media.anz.com/) for more detail on the content and methodology of these series.

Counts of job advertisements can differ from counts of job vacancies for several reasons, including the multiple advertising of a single job. Further, recruitment through word of mouth, on site notices, etc., are included in JVS but are out of scope for the ANZ Job Advertisements Series.

SEEK New Job Ads Index

SEEK produces a monthly New Job Ads Index, which measures the number of new job ads posted on their website in a particular month. The series is adjusted to ensure that multiple postings count as one ad. The index is available in both original and seasonally adjusted terms. Readers should refer to the [SEEK Employment Index report \(https://www.seek.com.au/about/news/seek-employment-reports/\)](https://www.seek.com.au/about/news/seek-employment-reports/) for more detail on the content and methodology of these series.

National Skills Commission Vacancy Report

The National Skills Commission Vacancy Report produces four series:

- the Internet Vacancy Index (IVI), based on a count of newly lodged online vacancies on selected employment internet sites (from secondary sources);
- the Skilled IVI, based on counts of internet advertisements for skilled vacancies (the aggregation of Australian and New Zealand Standard Classification of Occupations (ANZSCO) categories Professionals, and Technicians and Trade Workers);
- the Regional IVI, which provides indices for more detailed geographic areas; and
- the Detailed Occupational IVI, which provides indices for occupations based on the Australian and New Zealand Standard Classification of Occupations (ANZSCO).

The National Skills Commission codes internet advertisements to occupation at the ANZSCO four digit level for Australia. See the [National Skills Commission Vacancy Report \(https://lmip.gov.au/default.aspx?LMIP/GainInsights/VacancyReport\)](https://lmip.gov.au/default.aspx?LMIP/GainInsights/VacancyReport) for more detail on the content and methodology of these series.

Earnings

Earnings guide

See our [Earnings guide \(/statistics/understanding-statistics/guide-labour-statistics/earnings-guide\)](/statistics/understanding-statistics/guide-labour-statistics/earnings-guide) for summary information on our range of earnings data. It complements the detailed conceptual information in this Earnings chapter of Labour Statistics: Concepts, Sources and Methods by providing practical guidance on our different earnings measures, their purpose and how to use them.

Statistics of employee remuneration are required for the planning, evaluation and monitoring of economic and social development. Demand for these statistics comes from governments, social and labour market analysts, industrial tribunals, trade unions, employer associations, academics and international agencies.

Comprehensive statistics on remuneration, classified by sex, occupation, skill, industry etc., are in demand because of the role they play in the evaluation of social welfare, taxation, monetary, wage fixation, inflation and prices policies; investment decisions; studies of corporate and international competitiveness; and measurement of living standards.

In recognition of the variety of needs for data in this area, the [12th International Conference of Labour Statisticians \(ICLS\) in 1973 \(http://www.ilo.org/public/english/bureau/stat/download/res/wages.pdf\)](http://www.ilo.org/public/english/bureau/stat/download/res/wages.pdf) recommended that countries collect a range of interrelated wages statistics to meet users' differing needs. More information on wages statistics can also be found in [An integrated system of wages statistics \(https://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/presentation/wcms_315657.pdf\)](https://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/presentation/wcms_315657.pdf).

The ABS produces a range of statistics relating to the remuneration of employees in return for work done. These statistics have been developed to meet the various needs of users for information on the returns to labour from economic production, the contribution of employee income to total household income, and the level and distribution of weekly earnings.

The remuneration paid to employees for their work is of interest from both social and economic perspectives, in terms of the income received by employees and the cost of labour for employers. The measures produced include compensation of employees in the quarterly national accounts, employee income in income distribution statistics, average weekly earnings series and the Wage Price Indexes.

The first section of this chapter outlines international concepts of labour costs, compensation of employees, earnings, and household (and employee) income. The rest of this chapter outlines the definitions associated with various ABS statistics of employee remuneration; measures and classifications associated with these statistics; and sources of Australian statistics, including non-ABS series.

Concepts and international guidelines

International standards and guidelines provide the broad principles behind ABS statistics of employee remuneration, ensuring

comparability with those of other countries that use the standards. However, the international standards are very general, and need to be interpreted in the context of each country's own situation.

This section outlines the international guidelines in the four main areas of interest, namely:

- costs incurred by employers as a consequence of employing labour;
- the compilation of the national accounting aggregate compensation of employees;
- the measurement of earnings received by employees in exchange for their labour; and
- the measurement of household and employee income.

Labour costs

Labour costs are defined as:

"...remuneration for work performed, payments in respect of time paid for but not worked, bonuses and gratuities, the cost of food, drink and other payments in kind, cost of workers' housing borne by employers, employers' social security expenditures, cost to the employer for vocational training, welfare services and miscellaneous items, such as transport of workers, work clothes and recruitment together with taxes..."

[International Labour Organisation, 11th ICLS, 1966 \(http://www.ilo.org/public/libdoc/ilo/1966/66B09_188_engl.pdf\)](http://www.ilo.org/public/libdoc/ilo/1966/66B09_188_engl.pdf)

The statistical measure of labour costs is based on the concept of labour as a cost to the employer in the employment of labour, and relates to: all cash and in-kind payments of wage and salaries to employees; all contributions by employers in respect of their employees to social security, private pension, casualty insurance, life insurance and similar schemes; and all other costs borne by employers in the employment of labour that are not related to employee compensation (such as costs of training, welfare services to employees, payroll taxes etc.). Measures of labour cost should be net of any subsidies, rebates or allowances from governments for wage and salary payments to employees, or for other labour costs borne by employers.

Compensation of employees

The [System of National Accounts 2008 \(https://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf\)](https://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf) (2008 SNA) provides the statistical framework for summarising and analysing economic flows, such as economic production, the income generated by production, the distribution of income among the factors of production, and the use of income through consumption or the acquisition of assets.

The 2008 SNA, produced jointly by the United Nations, International Monetary Fund, World Bank, Commission of the European Communities and the Organisation for Economic Co-operation and Development, has been adopted by the ABS as the conceptual basis for compiling the Australian System of National Accounts (ASNA).

National accounts statistics are measured at the aggregate macro-economic level, and are compiled as aggregations of transactions that occur between units in the various institutional sectors (such as the household sector and the government sector). Although compiled at a macro-economic level, the structure and definitions of the national accounts can also be related to the micro-data collected in household surveys and other data collections.

Compensation of employees concepts and international guidelines

Compensation of employees is defined as:

"...the total remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done by the latter during the accounting period."

[United Nations, System of National Accounts 2008 \(https://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf\)](https://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf)

The national accounting aggregate that is of main interest in relation to remuneration of employees is compensation of employees, which measures income earned by employees from their employers for services rendered.

The 2008 SNA partitions compensation of employees into three main components: wages and salaries in cash, wages and salaries in kind, and employers' social contributions.

Wages and salaries in cash

Wages and salaries in cash include wages and salaries paid at regular intervals, together with payments by measured result and piecework payments, allowances for working overtime, for working away from home and similar taxable allowances, pay for annual and other leave for short periods, ad-hoc bonuses and commissions, gratuities and tips received by employees.

Wages and salaries in kind

Employees can also be remunerated in wages and salaries in kind, such as goods or services. The provision of goods and services as part of remuneration may reflect taxation advantages for the employer or employee by avoiding payments in cash, or arrangements where the employer provides free or subsidised accommodation, travel, food, motor vehicles, employee stock options and other goods and services for the private use of employees.

In terms of valuing the in-kind payments, the 2008 SNA recommends: "When the goods or services have been purchased by the employer, they should be valued at purchasers' prices. When produced by the employer, they should be valued at producers' prices. When provided free, the value of the wages and salaries in kind is given by the full value of the goods and services in question. When provided at reduced prices, the value of the wages and salaries in kind is given by the difference between the full value of the goods and services and the amount paid by the employee."

Employers' social contributions

Employers' social contributions are incurred by employers in order to secure social benefits for their employees. In theory, the contributions are made well in advance of the benefits being paid; for example, there is a time difference between the payment of contributions to a superannuation fund and the receipt of superannuation benefits by retired employees. In the national accounts, entitlements to social benefits are generally dependent on certain events or circumstances occurring, such as sickness, accidents, redundancy or retirement. Contributions are treated as part of remuneration, while the benefits are treated as part of households' secondary income. The treatment is largely analogous to the payment of premiums and the receipt of claims with respect to insurance transactions.

Compensation of employees concept as applied in Australia

In the ASNA, the same basic framework as presented in 2008 SNA is used. However, for measurement reasons, there are differences between the conceptual ideal presented above and the actual estimates compiled within the ASNA. The differences relate to severance, termination and redundancy payments, sick leave and other leave payments (except annual and long service leave payments), and changes in provisions for future employee entitlements.

Severance, termination and redundancy payments, sick leave and other leave are types of social benefit payments. There is no separately modelled estimate of the contributions required to provide the benefits, with the actual benefit payments in any period used to estimate the contributions. It is this amount that is included in compensation of employees. Although some information has been collected in the past to separately identify severance, termination and redundancy payments from other wages and salaries, currently no information is available to consistently differentiate between these types of payments and other wage and salary payments. Consequently, the imputed contributions that relate to these benefits are included in wages and salaries in cash, rather than in employers' social contributions.

Under full accrual accounting the estimate of the remuneration of employees would be based on the change in the level of outstanding entitlements to remuneration, particularly with respect to annual, sick and long service leave. While the ASNA would ideally use information on a full accruals basis, a reasonably large proportion of the data collected with respect to wages and salaries is on a cash basis, and hence the ASNA does not fully account for the changes in provisions as required by the international standards.

Treatment of shares and share options

Wages and salaries paid in kind covers the cost of goods and services which are provided to the employee, or to another member of the employee's household, free of charge or at a substantial discount, and which are clearly of benefit to the employee as a consumer. This includes stock options paid as bonuses, redundancy packages or annual salary agreements.

The value of employee stock options that forms part of compensation is estimated as at the vesting date, which is the date at which the employee becomes entitled to receive shares or exercise an option to buy shares. However, in view of the fact that the entitlement is usually earned progressively over a longer period, the value will be spread over the period from the original grant date to the vesting date. Any change in value between the vesting date and the date of actual exercise of options will not be treated as employee compensation, but as a capital gain or loss.

Earnings

The integrated system of wages statistics, developed by the International Labour Organization (ILO) as a result of the 12th ICLS in 1973, sets out the international standards for the concepts, definitions and classifications used in the collection and compilation of statistics of wage rates, earnings and labour costs. More recent international statistical standards, including the 2008 SNA and the [17th ICLS resolution on household income statistics \(http://www.ilo.org/public/english/bureau/stat/download/res/hiestat.pdf\)](http://www.ilo.org/public/english/bureau/stat/download/res/hiestat.pdf), have remained consistent, as far as possible, with the ILO's integrated system of wages statistics.

The system of wages statistics is designed to meet the needs for information on the levels and movements in average earnings, and on distribution of earnings and hours for different employee types.

Earnings concepts and international guidelines

The statistical measure from the integrated system of wages statistics of main interest in measuring remuneration of employees is 'earnings'. Earnings statistics are based on the concept of wages and salaries as income to the employee. The concept broadly aligns with the wages and salaries component of compensation of employees in the 2008 SNA. However, whereas the national accounts measures wages and salaries as an economic flow over an annual or quarterly period, earnings statistics are generally a series of 'point-in-time' measures of the average earnings of employees in a short reference period. As a result, the definition of earnings is slightly narrower than

the national accounts definition of wages and salaries. It refers to remuneration paid 'as a rule at regular intervals', to differentiate between earnings that can be expected to be received regularly (e.g. annually, quarterly or fortnightly) and one-off payments.

International guidelines for wages statistics define earnings as:

"...remuneration in cash and in kind paid to employees, as a rule at regular intervals, for time worked or work done together with remuneration for time not worked such as for annual vacation, other paid leave or holidays. Earnings exclude employers' contributions in respect of their employees paid to social security and pension schemes and also the benefits received by employees under these schemes. Earnings also exclude severance and termination pay.

Statistics of earnings should relate to employees' gross remuneration, i.e. the total before any deductions are made by the employer in respect of taxes, contributions of employees to social security and pension schemes, life insurance premiums, union dues and other obligations of employees."

[International Labour Organization, 12th ICLS, 1973 \(https://ilostat.ilo.org/about/standards/icls/\)](https://ilostat.ilo.org/about/standards/icls/)

The ICLS guidelines state that the value of wages and salaries in kind should be the value directly accruing to the employee (rather than the cost to the employer). In other words, the value should reflect what it would cost the employee to purchase the goods or services themselves. As individuals are generally only able to purchase goods and services at retail prices, it is appropriate to value wages and salaries in kind at retail prices. However, the guidelines also note that, for employer based surveys, the valuation of wages and salaries in kind depends on whether the employer is supplying its own product (in which case producer prices should be used) or acquiring goods or services to be passed to the employee (in which case purchaser prices should be used).

Earnings concept as applied in Australia

Notionally, the earnings concept used in Australia is consistent with the international concept, although in operationalising the concept in surveys of employers, measures of earnings generally excluded wages and salaries in kind prior to 2006, largely due to practical considerations. Information on the value of benefits provided by the employer has not always been readily available from employer payrolls, and the contribution of wages and salaries in kind to total employee earnings was relatively insignificant when most of the relevant surveys were first established.

However, as a result of changes in the nature of employee remuneration arrangements in recent years, in particular the increasing use of salary sacrifice arrangements, the ABS reviewed the conceptual basis of remuneration statistics in late 2006. The key change to the conceptual basis following on from this review is that the value of goods and services obtained through salary sacrifice arrangements, i.e. where the employee has chosen to forgo wages and salaries in cash in order to receive the goods or services, are now included conceptually in wages and salaries in cash. Wages and salaries in kind will continue to be excluded from earnings measures. For further information, see [Information Paper: Changes to ABS Measures of Employee Remuneration \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6313.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6313.0).

Household income

Statistics on household income at the aggregated macro-economic level are described within the 2008 SNA. Total gross household sector income is the income accruing to the household sector from production (principally compensation of employees, which is of main interest in analysing remuneration issues) and from property income (such as interest and dividends), together with current transfers from other sectors.

In addition to forming sector level aggregates, statistics on household income can be compiled from the perspective of measuring the economic well-being of individuals and households, in terms of the distribution of income across households and individuals for various population subgroups of interest.

Household income concepts and international guidelines

International guidelines for the measurement of household income were revised in 2003 at the [17th International Conference of Labour Statisticians \(ICLS\) \(http://www.ilo.org/public/english/bureau/stat/download/articles/2004-1.pdf\)](http://www.ilo.org/public/english/bureau/stat/download/articles/2004-1.pdf), an expert group convened by the ILO. The guidelines were developed for the purposes of measuring income distribution on a comparable basis internationally, and for the collection and dissemination of household income statistics at aggregate and micro-data levels that are consistent, to the extent possible, with other international guidelines, including SNA93.

In the ICLS guidelines the concept of household income consists of all receipts, whether monetary or in kind (goods and services), that are received by the household or by individual members at annual or more frequent intervals, but excludes windfall gains and other such irregular and typically one-time receipts. Household income receipts are available for current consumption and do not reduce the net worth of the household through a reduction of its cash, the disposal of its other financial or non-financial assets, or an increase in its liabilities.

The 2003 ICLS guidelines include definitions for the components of household income. The component 'employee income' is defined to be broadly comparable with the definition of compensation of employees in the 2008 SNA.

Employee income concepts and international guidelines

Guidelines for household income statistics define employee income as comprising:

"...direct wages and salaries for time worked and work done, cash bonuses and gratuities, commissions and tips, directors' fees, profit-sharing bonuses and other forms of profit-related pay, remuneration for time not worked as well as free or subsidised goods and services from an employer. It may include severance and termination pay as well as employers' social contributions."

[International Labour Organization, 17th ICLS, 2003 \(https://ilostat.ilo.org/about/standards/icls/\)](https://ilostat.ilo.org/about/standards/icls/)

The flexibility in the ICLS definition of employee income regarding both severance and termination pay and employers' social contributions can give rise to two situations where employee income will not be consistent with the 2008 SNA definition of compensation of employees. Firstly, compensation of employees includes employers' social contributions, so if the option to exclude them from employee income is exercised then a difference arises between the two measures. Secondly, provision for severance and termination pay is classified in SNA93 as part of employers' social contributions, and SNA93 provides practical advice that these provisions can be approximated by the actual payments occurring in a reference period. Exercising the option to include the actual severance and termination payments in employee income, when the provision for them is not included as part of employers' social contributions within employee income, will reduce the difference between employee income and compensation of employees.

The 2003 ICLS guidelines value employee income in kind at relevant market prices (producer or basic prices) for equivalent goods and services, in line with SNA93 recommendations. Market prices include transport costs, taxes and subsidies. Where the employee income in kind consists of the outputs of the employer's production processes, and is 'imposed payments in-kind' with little or no market value, a zero value is applied in computing employee income.

Employee income concept as applied in Australia

In the dissemination of household income statistics, the ABS defines the employee component of income to include regular and recurring cash receipts from wages and salaries.

The severance and termination payments and other employers' social contributions, which are part of compensation of employees in the ASNA, are excluded from Australian household income statistics. In addition, the concept of employee income differs from the ASNA concept of wages and salaries by excluding income in kind, which includes employee benefits such as the provision of a house or a car.

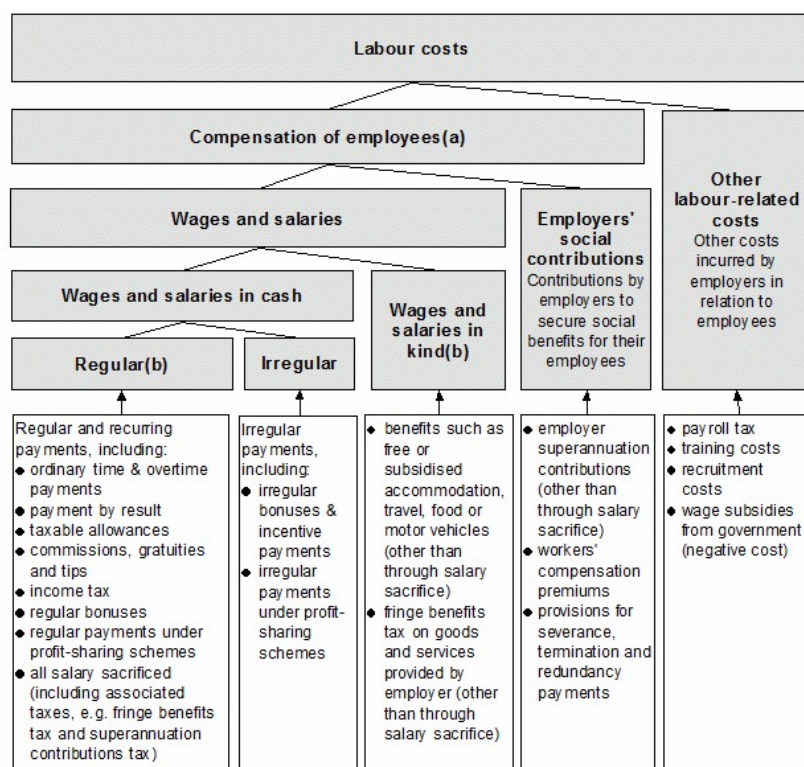
Restricting measurement of employee income to regular and recurring wages and salaries in a 'current income' concept was intended to provide a measure of the income that was currently available to the household to support their living standards, and the income that was likely to be available in the near future. That is, in looking at weekly income at the household level, a one-off payment received during the survey reference period was not included in measures of household income as it was not ongoing income.

The exclusion of income in kind was largely an historical issue arising from the impracticality of reliable reporting by householders for the value of income in kind, and reflected an expectation that the amounts would not be so significant as to affect distributional analysis at the household level. Changes in aggregate household income, inclusive of such in-kind income over time, would be reflected in the national accounts concept.

Employee remuneration conceptual framework

The diagram below summarises the conceptual framework for statistical measures of employee remuneration in Australia (in the context of the broader concept of labour costs). The narrowest concept outlined in the international guidelines is that of 'Earnings'. Concepts of 'Wages and salaries', 'Employee income', 'Compensation of Employees' and 'Labour costs' all include and extend upon the concept of 'Earnings'.

Australian conceptual framework for measures of employee remuneration



Summarises the conceptual framework for statistical measures of employee remuneration in Australia. Labour costs are the cost to the employer in the employment of labour, including all cash and in-kind payments of wages and salaries to employees; all social contributions by employers in respect of their employees, and all other costs borne by employers in the employment of labour that are not related to employee compensation.

a. The concept 'employee income' is broadly comparable with compensation of employees.

b. Conceptually, earnings comprise regular wages and salaries in cash and regular wages and salaries in kind.

ABS data sources

The ABS produces earnings statistics, as well as earnings related measures, from a range of sources.

Household surveys provide:

- earnings by socio-demographic characteristics;
- earnings by a range of employment characteristics, such as paid leave entitlements; and
- greater geographic information about place of usual residence including Statistical Area level 4 under the Australian Statistical Geography Standard.

However, limitations of household surveys data include:

- earnings are less robust, with reliance on respondents' accurate recall of (pre-tax) earnings;
- some respondents report on behalf of others in the household which can affect the quality of data reported;
- fewer and less robust information about business characteristics; and
- components of earnings estimates not available.

Employer surveys provide:

- more accurately reported earnings as data are obtained from employers' payrolls;
- components of earnings collected separately (i.e. ordinary time and overtime earnings); and
- consistent business characteristics (such as industry and business size), as this information is maintained on the ABS Business Register.

However limitations of employer surveys data include:

- limited socio-demographic characteristics of employees;
- limited information about characteristics of employment; and
- only state/territory geographic information about place of work available.

Our [Earnings guide \(/statistics/understanding-statistics/guide-labour-statistics/earnings-guide\)](#) provides summary information on our various earnings measures, their purpose and how to use them.

ABS data sources for earnings, employment income and total personal income

	Designed to measure	Frequency/Type of data source	Benefits	Primary publication
Average Weekly Earnings	The level of average weekly earnings of employees.	Biannual business survey.	Time series data available (including seasonally adjusted and trend estimates).	Average Weekly Earnings. Australia.
Census	Total personal income collected in ranges. Household and family income imputed from personal income.	Population census conducted every 5 years.	Data available for small geographic areas.	Data available from ABS website (TableBuilder).
Characteristics of Employment	Earnings and the distribution of weekly earnings.	Annual household survey conducted in August.	Detailed socio-demographic information and labour force statistics. Distributional data available.	Characteristics of Employment
Economic Activity Survey	Earnings and the distribution of weekly earnings.	Annual business survey combined with ATO administrative data (business activity statement).	Time series data available, cross classified by industry divisions and subdivisions.	Australian Industry.
Employee Earnings and Jobs	Experimental employee earnings estimates using administrative data.	First publication using data from an experimental linked employer-employee database (LEED).	Demonstrates the feasibility linking employer and employee information to inform labour supply and labour demand and to provide a high quality job count.	Information Paper: Construction of Experimental Statistics on Employee Earnings and Jobs from Administrative Data. Australia.
Estimates of Personal Income for Small Areas	Regional estimates of employment and total income for persons who lodge a tax form, using data sourced from the Australian Tax Office (ATO).	Annual analysis of ATO administrative data (personal income tax).	Data for small areas, down to Local Government Area level.	Estimates of Personal Income for Small Areas, 2011-15.
Quarterly Business Indicators Survey	Revenue, profits, inventory and wages paid by private sector businesses.	Quarterly business survey.	Time series data available.	Business Indicators, Australia.
Survey of Employee Earnings and Hours	Composition and distribution of earnings (weekly and hourly) of employees, hours paid for and whether their pay is set by award, collective agreement or individual arrangement.	Biennial business survey with payroll employee component.	Data cross-classified by employer and some employee characteristics. Distributional data available.	Employee Earnings and Hours. Australia.
Survey of Employment and Earnings	Public sector employee earnings paid by level of Government.	Annual business survey.	Public sector estimates, by level of government.	Employment and Earnings, Public Sector, Australia.
Survey of Income and Housing	A breakdown of household income, including wages and salaries.	Two-yearly household survey.	Distributional data on the broader context of household income and components available (including labour income) cross-classified by several employee characteristics.	Household Income and Income Distribution. Australia.
Survey of Major Labour Costs	Total earnings as well as other labour costs borne by businesses, for example payroll tax.	Irregular (currently run every 6 years) business survey.	Earnings data in the broader context of labour costs. Data per employee also available.	Labour Costs, Australia.
Wage Price Index	Changes in the price of wages and salaries resulting from market pressures.	Quarterly business survey.	Estimate of pure wage inflation removing the effect of composition.	Wage Prices Index, Australia.

Earnings

Estimates of earnings are produced from a number of ABS surveys and include measures of average weekly earnings, earnings distributions and earnings composition. The definition of earnings, and the measures produced, varies between surveys as discussed below.

The key ABS collections producing earnings statistics are:

- the biannual (six-monthly) survey of Average Weekly Earnings (AWE)
- the biennial (two-yearly) survey of Employee Earnings and Hours (EEH)
- the annual survey of Characteristics of Employment (COE)

In the first two surveys (which are employer based), the measure of earnings relates to a short reference period (e.g. a pay period), and is restricted to cash wages and salaries that are received regularly and frequently. The measure of earnings includes, for practical reasons, employer payments for sick leave (conceptually part of employers' social contributions in 2008 SNA).

The measure of earnings used in the COE survey (which is a household survey) relates to the most recent pay; that is, the last total pay before tax or any other deductions. It also includes irregular and infrequent payments, and payments related to other periods. This is for practical reasons only.

Estimates of earnings are also produced from the Survey of Employment and Earnings (SEE) and the Survey of Major Labour Costs (MLC); however, these surveys use a broader definition.

Weekly Payroll Jobs and Wages also produces a near real-time index of changes in wages.

Survey of Average Weekly Earnings

The AWE survey measures regular wages and salaries in cash associated with employee jobs. Estimates of average weekly earnings, and changes in average weekly earnings, are published twice yearly (in respect of the May and November quarters). The definition used in the AWE survey aligns closely with the international definition of earnings.

The earnings measure collected in the AWE survey is limited to:

- remuneration for time worked or work done - ordinary time and overtime pay, penalty payments, commissions (where a retainer, wage/salary is also paid), taxable allowances (e.g. shift, site, dirt, height allowances), incentive and piecework payments, directors salaries;
- remuneration for time not worked - including paid leave and public holidays, and workers compensation payments paid through the payroll; and
- bonuses and gratuities - includes regular and frequent bonuses only (e.g. weekly, fortnightly or quarterly), and regular payments made under profit sharing schemes.

The following components of remuneration are excluded from AWE earnings measures:

- wages and salaries in kind;
- amounts salary sacrificed; and
- all other payments that are irregular or are not related to the survey reference period - including retrospective pay and pay in advance, severance, termination and redundancy payments; leave loadings; and half-yearly, annual or irregular bonuses.

In addition, estimates which are inclusive of salary sacrifice are now compiled from the AWE survey. The Average Weekly Cash Earnings (AWCE) series are available in respect of the May 2010 quarter onwards. The new AWCE series complement (rather than replace) the existing series by providing estimates of average weekly earnings which include salary sacrificed earnings.

Estimates of average weekly earnings are derived by dividing estimates of gross weekly earnings by estimates of number of employees. These measures do not relate to the earnings of the 'average employee'.

Changes in the average may be affected not only by changes in the underlying rates of pay, but also by changes in the weekly hours worked (or paid for) and by changes in the composition of jobs in the workforce. Compositional changes can be the result of variations in the proportion of full-time, part-time, casual, adult and junior employees, variations in the occupational distribution within and across industries, variations in the distribution of employees between industries, and variations in the proportion of male and female employees.

The AWE survey produces a range of estimates of average weekly earnings paid per employee job. The following estimates are produced: average weekly ordinary time earnings for full-time adults; average weekly total earnings for full-time adults; and average weekly total earnings for all employee jobs (i.e. whether full-time or part-time, or whether paid at adult or junior rates). These estimates can be classified by sex, sector, industry and state/territory.

Survey of Employee Earnings and Hours

The biennial Survey of Employee Earnings and Hours (EEH) measures regular wages and salaries in cash associated with employee jobs. The EEH survey produces estimates of earnings distributions and average weekly earnings classifiable by sex, adult/junior status, managerial/non-managerial status, full-time/part-time status, hours paid for, components of pay, occupation, industry, sector, level of government, state/territory, and method of setting pay.

From the 2006 EEH survey onwards, earnings measures include amounts salary sacrificed.

The components of earnings available from the EEH survey are ordinary time cash earnings and overtime cash earnings. Ordinary time cash earnings relates to payment for award, standard or agreed hours of work, including allowances, penalty payments, payment by measured result, regular and frequent bonuses and commissions (where a retainer/wage/salary is also paid). Overtime cash earnings relates to payment for hours in excess of award, standard or agreed hours of work.

The EEH survey also produces estimates of average hourly total earnings for non-managerial employees, classified by male/female, permanent/fixed-term contract/casual, state/territory, and method of setting pay. These estimates are derived by dividing estimates of gross weekly earnings by estimates of total weekly hours paid for.

Characteristics of Employment Survey

Earnings measures used in the annual Characteristics of Employment (COE) household survey relate to gross payments received from either the main job or all jobs during the reference period. No adjustments are made to exclude components of pay that are outside the international earnings definition, such as irregular bonuses, and components of pay that do not relate to the reference period (such as retrospective pay and pay in advance). Earnings measures produced from COE are restricted to cash earnings, i.e. they exclude contributing family workers.

The COE survey produces estimates of mean and median weekly earnings per employee. Estimates of mean weekly earnings of employees are derived by dividing estimates of gross weekly earnings by estimates of the number of employees. Mean weekly earnings represent the average gross (before tax) earnings of employees. Median weekly earnings are defined as the earnings amount which divides the earnings

distribution into two groups with equal numbers of employees, one half having weekly earnings below the median and the other half having weekly earnings above the median.

Separate estimates are produced for earnings in main, second and all jobs held by employees; and earnings distributions. Estimates are produced for both main job and all jobs, classifiable by a range of socio-demographic and economic variables including age, birthplace, sex, relationship in household, state/territory of usual residence, industry, occupation, sector, full-time/part-time status and hours worked.

Survey of Employment and Earnings and Survey of Major Labour Costs

Earnings statistics are also produced from the Survey of Employment and Earnings (SEE) and the Survey of Major Labour Costs (MLC). However, unlike the AWE, EEH and COE surveys, the SEE and MLC surveys are not designed to produce estimates of the concept of earnings per se, but estimates which align with the broader concepts of wages and salaries, compensation of employees or labour costs. As such, SEE and MLC define earnings more broadly than in the AWE and EEH surveys, and estimates are not comparable across surveys.

The definition used in SEE and MLC extends upon the definition of earnings by also including irregular payments (such as irregular bonuses) and other payments which may not relate to the reference period (such as pay in advance and retrospective pay). MLC also includes severance, termination and redundancy payments, and all fees paid to directors and office holders. Separate estimates of severance, termination and redundancy payments are also available from SEE.

Estimates from SEE and MLC are primarily used in the production of estimates of compensation of employees within the Australian National Accounts. Unlike the AWE and EEH surveys, which are designed to estimate average earnings levels at a point in time, the SEE and MLC surveys are designed to estimate earnings flows to employees over a financial year.

Compensation of employees

The remuneration earned by employees for labour services rendered is measured in the Australian National Accounts aggregate 'compensation of employees'. The compensation of employees measure comprises wages and salaries in cash or in kind, and the value of employer's social contributions for their employees.

The key sources used in compiling estimates of compensation of employees are:

- the Economic Activity Survey (EAS);
- the Quarterly Business Indicators Surveys (QBIS); and
- the SEE.

Data from the infrequent MLC survey are also used to provide benchmark information. A more detailed description of the concepts, sources and methods used to compile the national accounts is presented in Australian System of National Accounts: Concepts, Sources and Methods. Estimates of compensation of employees are contained within the Income Accounts of the Australian National Accounts, which are published in Australian System of National Accounts, and Australian National Accounts: National Income, Expenditure and Product.

Labour costs

Estimates of labour costs are produced from the MLC, and the annual Economic Activity Survey.

Estimates of the underlying changes in the price of labour (indexes of changes in hourly labour costs for employee jobs) are produced from the Wage Price Index.

Survey of Major Labour Costs

The measure of labour costs available from the MLC survey relates to the main costs incurred by employers as a consequence of employing labour. The labour cost components collected in the MLC survey are:

- Employee earnings;
- Superannuation;
- Payroll tax;
- Workers' compensation; and
- Fringe Benefits Tax.

A number of labour costs are not collected in the MLC Survey. These include: training costs; costs associated with employee welfare services; and recruitment costs. With the exception of training costs, these items are not considered to make a significant contribution to total labour costs. Training costs were collected in the ABS Training Expenditure and Practices Survey, conducted for financial year 2001-02, and in the earlier Training Expenditure Survey conducted for September quarters of 1989, 1990, 1993 and 1996. Costs covered in these surveys are for structured training provided by employers. For information see Employer Training Expenditure and Practices, Australia.

All data are collected on a cash basis, i.e. they reflect actual payments made in the survey reference period. As such, they do not reflect costs incurred in the reference period for which payments are made in a later period, but they include payments made in the survey

reference period for costs incurred in a prior period. The survey has a 12 month (financial year) reference period and is conducted on an infrequent basis.

Estimates of total labour costs and costs per employee job can be cross classified by state/territory, industry, sector, level of government and employer size.

Earnings

As discussed above, the definition of earnings used in the MLC is broader than that used in the AWE, EEH and COE surveys.

Superannuation

For the MLC survey, superannuation costs are the total employer superannuation contributions paid during the year on behalf of employees. It excludes the value of salary sacrificed by employees in exchange for superannuation contributions. During 2002-03, legislation underlying the Superannuation Guarantee Charge (SGC) required that employers provide superannuation contributions of at least 9% of gross wages and salaries for all eligible employees. Although employers may treat the value of salary sacrificed by employees to superannuation as employer contributions under SGC obligations, in this survey such contributions are treated as earnings, and not as superannuation costs. Occasionally, surplus funds of some defined benefit superannuation schemes are used to offset the superannuation cost incurred by contributing employers in a particular time period.

Payroll tax

Payroll tax is defined as the amount of tax paid during the survey reference year in respect of employee earnings, net of any rebates. Payroll tax assessed for payments to contractors and other persons not considered employees is excluded.

Workers' compensation

Workers' compensation is the cost to the employer of providing workers' compensation cover for employees. There are three ways to meet these costs. The majority of employers pay a premium to an insurer. In this case, workers' compensation costs are considered to comprise premiums paid during the reference year, including the component that covers the employee for common law damages, and any workers' compensation costs not reimbursed by the insurer, including 'make-up' and 'excess' pay.

Some larger employers may become 'self-insurers' and cover most costs themselves. In this case, workers' compensation costs are considered to comprise lump sum payments and payments made as part of employee earnings, premiums paid during the year to offset liability at common law for workers' compensation, and any other costs, including common law costs not reimbursed by the insurer, such as legal, accounting, medical and administrative costs.

In the public sector, some workers' compensation costs are paid from consolidated funds. In most cases these payments relate to liabilities incurred under prior legislation.

Fringe Benefits Tax

Fringe benefits are remuneration provided to employees in the form of benefits such as goods or services - for example, use of a work car, a cheap loan, or health insurance costs. These may be provided through salary sacrifice arrangements, as part of salary packages, or through other arrangements. Fringe benefits tax (FBT) is payable on the value of benefits provided, although exemptions apply to some categories of employers (e.g. certain not-for-profit organisations) and certain benefits (e.g. laptop computers).

Australian Industry

Estimates of labour costs from the Australian Industry series are derived using a combination of data from the annual ABS Economic Activity Survey (EAS) and business income tax data provided by the Australian Taxation Office. This series defines labour costs more narrowly than the MLC survey. Labour costs are restricted to: wages and salaries paid to employees; employer contributions to superannuation; and workers' compensation. Severance, termination, and redundancy payments are included in wages and salaries. For further information on data content and collection methodology of this series, see [Australian Industry \(/statistics/industry/industry-overview/australian-industry/latest-release\)](https://www.abs.gov.au/statistics/industry/industry-overview/australian-industry/latest-release).

Wage Price Index

The quarterly Wage Price Index (WPI) measures the quarterly change in the price employers pay for labour due to market factors. The WPI is unaffected by changes in the quality or quantity of work performed; that is, it is unaffected by changes in the composition of the labour force, hours worked, or changes in characteristics of employees (e.g. work performance).

Wage Price Indexes (WPIs) were first produced by the ABS in the December quarter 1997. In the September quarter 2004, the inclusion of non-wage indexes complimented the existing suite of WPIs, and combined with WPIs to create Wage Price Indexes (LPIs). In March 2012, ABS program reductions led to the non-wage and LPI indexes being discontinued, with the September quarter 2011 representing the last in the series.

The ABS constructs four wage price indexes on a quarterly basis:

- ordinary time hourly rates of pay excluding bonuses;
- ordinary time hourly rates of pay including bonuses;
- total hourly rates of pay excluding bonuses; and
- total hourly rates of pay including bonuses.

For further information, see [Wage Price Index: Concepts, Sources and Methods \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6351.0.55.001Main+Features12012?OpenDocument\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6351.0.55.001Main+Features12012?OpenDocument).

Employee income

Employee income is defined as "regular and recurring cash receipts from wages and salaries". Employee income includes: wages and salaries; tips, commissions and regular bonuses; other profit-sharing bonuses; piecework payments; payment for recurring odd jobs, casual work; penalty payments and shift allowances; directors' fees; remuneration for time not worked (e.g. holiday pay, sick pay, pay for public and other holidays, and other paid leave); worker's compensation paid by the employer; and leave loadings.

Employee income excludes severance or termination pay, allowances paid by an employer purely to cover the cost of work-related expenses, and pension payments from unfunded schemes paid to former employees.

Measures of employee income are available from a number of ABS household collections including:

- the Survey of Income and Housing;
- the Household Expenditure Survey; and
- the Census of Population and Housing.

Survey of Income and Housing

The Survey of Income and Housing is a two-yearly survey that collects detailed information on employee income. For detail on the content and methodology of the survey, see [Household Income and Wealth, Australia \(/statistics/economy/finance/household-income-and-wealth-australia/latest-release\)](https://www.abs.gov.au/statistics/economy/finance/household-income-and-wealth-australia/latest-release).

Household Expenditure Survey

The Household Expenditure Survey (HES) also collects detailed information on employee income. Some information is collected on income in kind (namely consumable goods provided by employers). For more detail on the content and methodology of the survey, see [Household Expenditure Survey, Australia: Summary of Results \(/statistics/economy/finance/household-expenditure-survey-australia-summary-results/latest-release\)](https://www.abs.gov.au/statistics/economy/finance/household-expenditure-survey-australia-summary-results/latest-release).

Census of Population and Housing

The Census of Population and Housing collects information on total income levels (ranges) only. Estimates cannot be classified according to type of income. For more detail on the content and methodology of the Census, refer to the Household surveys section.

Linked Employer-Employee Dataset

Employee Income is available from the LEED. Information is available commencing from the 2011-12 financial year and is available down to micro-regional levels. Key statistics are published in [Personal Income in Australia \(https://www.abs.gov.au/statistics/labour/earnings-and-work-hours/personal-income-australia/latest-release\)](https://www.abs.gov.au/statistics/labour/earnings-and-work-hours/personal-income-australia/latest-release).

Workplace relations

Workplace relations can be regarded as the relationships and interactions in the labour market between employers and employees (and their representatives), and the intervention in these relations by governments, government agencies and tribunals (e.g. Fair Work Commission).

The field of workplace relations is complex and diverse and, for statistical purposes, is not easily measured. The ABS collects information on a number of topics to provide an insight into the state of the workplace relations environment. This section discusses statistics on: the different methods that are used to set pay of employees in Australia (such as award only, collective agreements and individual arrangements); trade union membership; and industrial disputes. Where they exist and are relevant, international guidelines relating to these statistics are also outlined.

Methods of setting pay

Statistical measures relating to how employees' pay is set (such as award only or through an agreement) are used to monitor the effects of industrial and workplace relations reforms and wages policy.

Concepts and International Guidelines

A collective agreement is defined as:

"...a written agreement concluded between one or more employers or an employers' organisation on the one hand, and one or more workers' organisations of any kind on the other, with a view to determining the conditions of individual employment, and in certain cases, to the regulation of other questions relative to employment".

[International Labour Organization, 3rd ICLS, 1926 \(http://ilo.org/global/statistics-and-databases/meetings-and-events/international-conference-of-labour-statisticians/WCMS_221510/lang-en/index.htm\)](http://ilo.org/global/statistics-and-databases/meetings-and-events/international-conference-of-labour-statisticians/WCMS_221510/lang-en/index.htm)

International guidelines on the production of statistical measures on how pay is set concern collective agreements (ICLS 1926) and relate to the numbers of, contents of, and employee coverage of collective agreements.

Definitions used in ABS surveys

The ABS does not collect statistics on the numbers or contents of collective agreements as defined by ICLS guidelines described above. However, data about pay setting methods are collected in the ABS Survey of Employee Earnings and Hours (EEH) biennially from May 2000 onwards. The definitions associated with these methods are outlined below.

The survey identifies the main methods used to set pay for employees in Australia, and estimates the proportion of employees who had their pay set using each method. The methods used to set pay identified in the survey are:

- award only;
- collective agreement; and
- individual arrangement.

Employees are classified to the award only category if they are paid at the rate of pay specified in the award, and are not paid more than that rate of pay. Awards are defined as legally enforceable determinations made by Federal or State industrial tribunals or authorities that set the terms of employment (pay and/or conditions), usually in a particular industry or occupation.

Awards have been the traditional way of setting minimum pay and conditions in Australia, and provide a safety net for employees. Employees on 'over-award' pay (i.e. paid at a certain amount or percentage above the rate of pay specified in an award) are classified as having their pay set by an unregistered individual arrangement. Under the current workplace relations system established by the Fair Work Act (2009), Fair Work Australia determines the minimum pay and conditions of employees in the national workplace relations system (federal jurisdiction) through modern awards. The minimum wage of each modern award is reviewed annually.

Employees who have a collective agreement with their employer which sets the main part of their pay are classified as having their pay set by a collective agreement. A collective agreement is defined as an agreement between an employer (or group of employers) and a group of employees (or one or more unions or employee associations representing the employees). A collective agreement sets the terms of employment (pay and/or conditions) for a group of employees. Collective agreements are further classified as registered or unregistered, reflecting whether they are registered with a Federal or State industrial tribunal or authority.

Employees who have an individual agreement, contract or other arrangement with their employer which sets the main part of their pay are classified as having pay set by an individual arrangement. An individual arrangement is defined as an arrangement between an employer and an individual employee on the terms of employment (pay and/or conditions) for the employee. Common types of individual arrangements are individual contracts (which are not allowed to be made under the Fair Work Act), letters of offer and common law contracts. An individual contract (or letter of offer) may specify all terms of employment, or alternatively may reference an award for some conditions and/or in the setting of pay (e.g. over-award payments).

There are some differences between the international definition of collective agreement and that used in the EEH:

- the definition of collective agreements outlined in the international guidelines is broader than the definition used in the EEH. The international definition encompasses both collective agreements and awards as defined in the ABS survey; and
- the definition of collective agreements outlined in the international guidelines is restricted to written agreements, whereas the survey definition includes both written and verbal agreements.

Data sources

Statistics on the characteristics of employees, their earnings and how their pay is set, for each of the methods of setting pay (award or pay scale only, collective agreement, and individual arrangement), are currently produced from the biennial ABS business survey, the Survey of Employee Earnings and Hours. For more information on the content and collection methodology of this survey, see the [Employee Earnings and Hours, Australia methodology \(/methodologies/employee-earnings-and-hours-australia-methodology/may-2018\)](http://methodologies/employee-earnings-and-hours-australia-methodology/may-2018).

Numbers and contents of collective agreements

The ABS does not collect statistics on the numbers or contents of collective agreements, as defined by ICLS guidelines described above. However, information of this type is available from other sources for collective agreements available under various State and Federal industrial relations jurisdictions. The amount and type of information available varies significantly, and readers should note that statistical

measures produced are not necessarily consistent with international statistical guidelines or other ABS measures of the economically active population.

Measures of numbers of awards and collective agreements that have been arbitrated, certified or registered with industrial tribunals are often published in the annual reports of the various State and Federal industrial relations tribunals. They are generally restricted to the numbers of award or pay scale only and collective agreements registered over a given reference period, and may also include details of the numbers of award or pay scale only and collective agreements currently in force and not replaced, and details of employees covered at registration date. Details of the numbers, employee coverage, wage outcomes and contents of certain types of collective agreements are also available from the Australian Centre for Industrial Relations Research and Training, the Commonwealth Department of Employment (Federal certified agreements) and, from time to time, the equivalent State government departments.

Trade union membership

Union membership in Australia has declined since the mid-1970s. The changing workplace relations environment is one of the key factors in the decline in trade union membership. Another factor is the change in the composition of the labour market, with a decline in jobs in the industries and types of employment (full-time permanent) that were traditionally highly unionised.

Concepts and definitions

A trade union is defined as an organisation consisting predominantly of employees, the principal activities of which include the negotiation of rates of pay and conditions of employment for its members.

There are no international recommendations or guidelines relating to statistics on trade union membership. Since August 2014, numbers of employees who are members of a trade union are collected on a two-yearly rotating basis from the Characteristics of Employment Survey (COE), a supplementary survey to the Labour Force Survey (LFS). Prior to August 2014, trade union membership was collected from the Employee Earnings, Benefits and Trade Union Membership (EEBTUM) Survey.

Data sources

Estimates of the number and proportion of employees who are trade union members, and the duration of and time since an employee was previously a trade union member, are produced annually from the Characteristics of Employment Survey.

Industrial disputes

International concepts and guidelines

International guidelines define labour disputes as:

"...a state of disagreement over a particular issue or group of issues over which there is conflict between workers and employers or about which grievance is expressed by workers or employers, or about which workers or employers support other workers or employers in their demands or grievances."

[International Labour Organization, 15th ICLS, 1993 \(http://ilo.org/global/statistics-and-databases/meetings-and-events/international-conference-of-labour-statisticians/WCMS_214299/lang-en/index.htm\)](http://ilo.org/global/statistics-and-databases/meetings-and-events/international-conference-of-labour-statisticians/WCMS_214299/lang-en/index.htm)

Labour disputes comprise strikes, lockouts and other types of action in which workers may be involved. Involvement may be direct or indirect: for example, workers may participate directly in strike by stopping work, or indirectly if they are prevented from working because of the strike. Secondary effects of action due to labour disputes are excluded from measures of disputes.

International guidelines define strikes as:

"...a temporary work stoppage affected by one or more groups of workers with a view to enforcing or resisting demands or expressing grievances, or supporting other workers in their demands or grievance".

Lockouts are defined as:

"...a total or partial temporary closure of one or more places of employment or the hindering of the normal work activities of employees, by one or more employers with a view to enforcing or resisting demands or expressing grievances, or supporting other employers in their demands or grievances."

[International Labour Organization, 15th ICLS, 1993 \(http://ilo.org/global/statistics-and-databases/meetings-and-events/international-conference-of-labour-statisticians/WCMS_214299/lang-en/index.htm\)](http://ilo.org/global/statistics-and-databases/meetings-and-events/international-conference-of-labour-statisticians/WCMS_214299/lang-en/index.htm)

Other types of action are defined as "actions affected by one or more groups of workers or by one or more employers, with a view to enforcing or resisting demands or expressing grievances, or supporting other workers or employers in their demands or grievances, in which there is no cessation of work". Other types of action include work bans, go slows, work limitations etc. Secondary effects are "the effects on other establishments where workers are prevented from working or their work is disrupted, or the effects on other groups of

self-employed workers who are prevented from working or whose work is disrupted". Examples of secondary effects include stand-downs because of lack of materials, disruption of transport services, and power shortages.

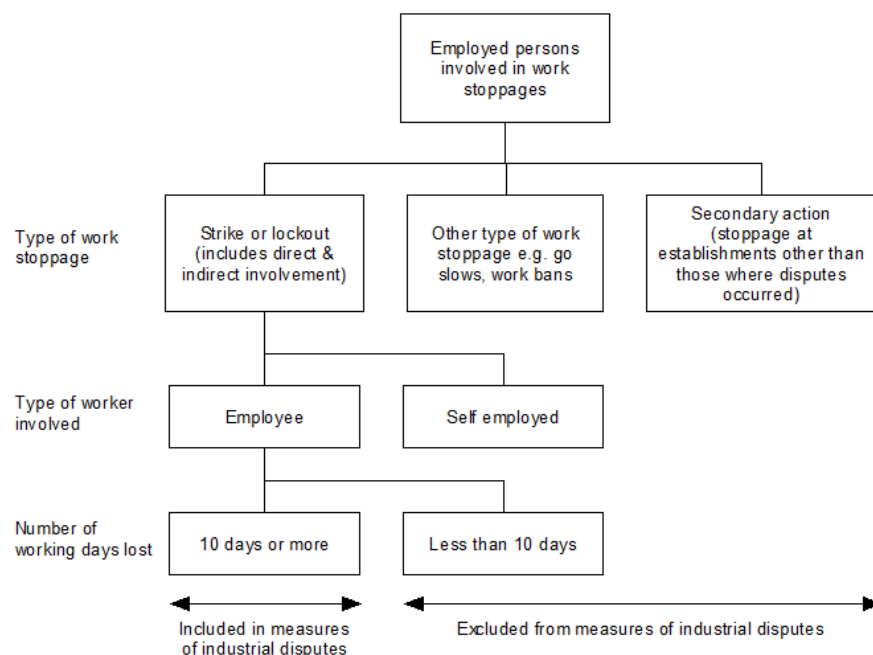
The international guidelines recommend a core set of statistical measures of disputes be collected, and that these be supplemented or extended by additional measures as appropriate. The core set of statistical measures should cover all strikes and lockouts, and all employees directly involved. Other types of industrial action and the self-employed are not core and should only be included where relevant. Measures of strikes and lockouts that should be collected include: numbers and duration of strikes and lockouts; and both numbers of workers involved and amounts of time lost by workers involved. Where possible, data relating to strikes and lockouts should be collected, compiled and presented separately.

Definitions used in ABS Industrial Disputes collection

Statistics on industrial disputes are collected by the ABS on a monthly basis in the Industrial Disputes collection and released for a quarterly reference period. Statistics on disputes in this collection are, as much as possible, based on the concepts and definitions outlined in international guidelines. The term 'industrial dispute' is defined more narrowly than in the international guidelines and refers to only 'strikes' and 'lockouts'. An industrial dispute is defined as "a state of disagreement over an issue or group of issues between an employer and its employees, which results in employees ceasing work. Industrial disputes comprise strikes, which are a withdrawal from work by a group of employees; and lockouts, which are a refusal by an employer or group of employers to permit some or all of their employees to work".

The ICLS definitions of strikes and lockouts explicitly mention the temporary nature of the stoppage or closure, and disputes in support of other workers. However, while neither of these issues is explicitly included in the ABS definition, both are applied in the collection of statistics. Statistics on industrial disputes are restricted to stoppages of work of ten working days or more and exclude both 'other forms of action' and the 'self-employed'. The number of working days lost is defined as the total amount of ordinary time lost by employees on strike or locked out, regardless of the length of the stoppage. Statistics include direct and indirect involvement at the locations where the stoppages occurred, but exclude secondary effects of industrial action (e.g. stand-downs at other locations because of lack of materials).

Types of Disputes Included in the ABS Industrial Disputes Collection



Statistics on industrial disputes are collected by the ABS on a monthly basis in the Industrial Disputes collection and released for a quarterly reference period. Statistics on industrial disputes are restricted to stoppages of work of ten working days or more and exclude both 'other forms of action' and the 'self-employed'. The number of working days lost is defined as the total amount of ordinary time lost by employees on strike or locked out, regardless of the length of the stoppage.

Other data collected in the Industrial Disputes collection include:

- Cause of dispute - relates to the main cause of stoppages of work, and not necessarily all causes that may have been responsible for work stoppages. Initially, the classification of cause of dispute identifies whether a dispute occurred during a process of workplace/enterprise bargaining. Disputes are then further classified according to the main cause of the dispute. Causes include: remuneration; employment conditions; health and safety; job security; managerial policy; and union issues.
- Working days lost per employee involved - for an individual dispute, defined as the average number of working days lost per employee involved in the dispute. It is calculated by dividing the number of working days lost in the dispute by the number of employees involved (both directly and indirectly).
- Employees directly involved in a dispute - those who actually participated in the dispute in order to enforce or resist a demand or to express a grievance.

- Employees indirectly involved in a dispute - those who were stood down at the location where the dispute occurred, but who were not themselves parties to the dispute. Employees who were stood down at locations other than those where the dispute occurred are excluded.
- Employees newly involved in a dispute - for a new dispute, comprise all employees involved and, for an ongoing dispute, those involved for the first time.
- Total employees involved - comprises employees newly involved and, for an ongoing dispute, those who continue to be involved. Total employees involved for any period of time is obtained by adding together the number of employees involved in each dispute for the period.
- Reason work resumed - relates to the reason(s) for ending the stoppage of work, and not necessarily to the reason(s) for settling all matters in the dispute. Reasons include: negotiation without intervention of a third party; State legislation; Federal legislation; pre-determined return to work; resumption without negotiation; and mediation.
- Working days lost - refers to working days lost by employees directly and indirectly involved in the dispute. Estimates of working days lost per thousand employees are calculated for a quarterly period by dividing the total number of working days lost in the period by the total number of employees in the Australian workforce in the period (obtained from the ABS Labour Force Survey) and multiplying by 1,000.

Data sources

ABS statistics on industrial disputes are released each quarter in [Industrial Disputes, Australia \(/statistics/labour/earnings-and-work-hours/industrial-disputes-australia/latest-release\)](#). Readers should refer [Industrial Disputes, Australia methodology \(/methodologies/industrial-disputes-australia-methodology/jun-2021\)](#) for more detail on the content and methodology of this collection.

Labour productivity

A productivity measure is an indicator of the efficiency or effectiveness of production; that is, how much production (or output) is achieved given a certain amount of resources (or input). The broadest definition of 'productivity', from the International Labour Organization (ILO) is "the ratio between output and the total input of factors required to achieve it". In this sense, productivity is "the end result of a complex social process including: science, research and development, education, technology, management, production facilities, workers and labour organisations".

Most analyses seeking to measure productivity have confined themselves to a partial (or single factor) measure, as opposed to total factor (or multi-factor) productivity. Single factor measures of productivity are expressed as a ratio between a given measure of output and a given measure of one factor of production (labour, capital, raw materials, etc.). It follows that there are many measures of productivity, each of which relates to a particular factor of production. It is therefore possible to speak of the productivity of labour, of capital, of raw materials, etc. Such measures reflect the growth in output not accounted for by the growth in that particular factor of production. The ratio of output to hours worked - often referred to as a measure of labour productivity - reflects the growth in output attributable to all factors of production other than hours worked. Often the measure used varies in accordance with the level at which productivity is analysed, e.g. plant, industry, branch of the economy or the economy as a whole.

Increases in labour productivity are often regarded as an indicator of improvements in aggregate living standards, as either more output (and thus total income) is achieved with given labour, or a given amount of output (and thus total income) is achieved with less time spent on labour.

Concepts and international guidelines

While the ILO has published two studies (in 1951 and 1969) on the measurement of labour productivity, no fixed definitions have been promulgated by that organisation. The view taken in the 1969 study was that, while it was useful to have a set of definitions which correspond to the various measures of productivity, it was premature to set a single productivity ratio for each measure. At the same time it was recognised that time worked or labour force may be suitable measures of labour input, while physical output and value-based measures were appropriate for considering output for particular purposes. This flexibility remains appropriate depending on what use or analysis is to be performed with the productivity measure involved.

Considerations such as those led an ILO Working Group on Productivity Statistics to make recommendations, especially on the economic coverage of productivity series, the choice of units of measurement for output, and the corresponding labour input. For output, estimates of real gross domestic product (GDP) were preferred. For labour inputs, the objective was to ensure that account was taken of all the activities of all persons engaged in production.

The Working Group considered that the improvement of labour productivity statistics depended on better national statistics on output, and on the existence of corresponding data for employment or hours of work. Similarly, it was considered that the ability to compare the trend and level of productivity between one country and another improved with the use of comparable concepts for the definition of output, input and prices, and the wider use of international standards in existence in these fields. The standards being referred to, in particular, were those of the International Conference of Labour Statisticians in respect of input, the United Nations System of National Accounts in respect of output, and the International Standard Industrial Classification in respect of scope and classification.

More recently, the ILO have included labour productivity information as part of the suite of statistics known as Key Indicators of the

Labour Market (KILM). This recognises labour productivity as "output per unit of labour input (persons engaged or hours worked)". Output is defined as GDP for the economy adjusted to account for price differences in countries, while the appropriate measure of labour input is identified as the total number of annual hours actually worked by all persons employed.

Definitions, methodology and sources

The ABS recognises that the level of GDP and changes in real GDP are a function of many different factors including capital, labour, technical knowledge, scale of production and managerial efficiency. Changes in any one of these factors can result in productivity changes. While it is impossible to objectively measure the role of these factors separately, it is recognised that one of the most important and widely accepted analytical series, which is a measure of labour productivity, is real GDP per hour worked.

Estimates of labour productivity (based on GDP per hour worked), for the market sector as a whole and for each industry, are compiled by the ABS and published in the annual Australian System of National Accounts. Quarterly indexes of GDP per hour worked are published for the market sector and for the whole economy in [Australian National Accounts: National Income, Expenditure and Product \(/statistics/economy/national-accounts/australian-national-accounts-national-income-expenditure-and-product/latest-release\)](#).

As partial measures of productivity, labour productivity indexes implicitly reflect the other factors of production, such as the contribution of capital and other factors affecting production such as technological change. When multiple factors of production such as labour and capital are explicitly considered as inputs, this is termed multi-factor productivity (MFP), which is measured as GDP per combined unit of labour and capital. MFP is often also used in productivity analysis, and for this reason the ABS also publishes annual indexes of MFP for the market sector in Australian System of National Accounts. In addition, the ABS produces annual MFP estimates at the industry level for industries within the market sector, which are available from Estimates of Industry Multifactor Productivity. The choice of which productivity measure to use depends on what analysis is being performed. For more information, see [Australian System of National Accounts: Concepts, Sources and Methods \(/statistics/detailed-methodology-information/concepts-sources-methods/australian-system-national-accounts-concepts-sources-and-methods/2020-21/chapter-19-productivity-measures\)](#).

Labour input

The most common measure of labour input used in compiling the estimates presented in Australian System of National Accounts and Australian National Accounts: National Income, Expenditure and Product is hours worked. It captures the hours worked in the production of goods and services by civilian wage and salary earners, employers, self-employed persons, unpaid family workers, and members of the Australian Defence Force.

Measuring labour input as hours worked implicitly assumes that the workforce is homogeneous. An alternative approach is to use quality adjusted labour inputs (QALI). The QALI method recognises improvements to human capital due to the varying educational achievements and experience within the workforce. QALI indexes are published for the market sector in the Australian System of National Accounts, for each market-sector industry and the twelve selected industries aggregates in Estimates of Industry Multifactor Productivity.

The quality changes in labour input are captured through accounting for heterogeneity across different types of workers, by aggregating different types of workers with weights (based on wage share) reflecting differences in their productive capacity. In this way, increases in labour input can be divided between total hours worked and compositional changes in the labour force. As the workforce evolves, this compositional change can directly affect how much output can be produced from a given quantity of hours worked.

The estimates of employment and hours worked are primarily drawn from the Labour Force Survey (LFS). Aggregate and industry QALI indexes are compiled using data from the Census of Population and Housing. Intercensal periods are interpolated, and therefore care should be taken interpreting year on year changes in labour composition. For further details refer to Chapter 19 of Australian National Accounts: Concepts, Sources and Methods.

Chain volume estimates for Gross Domestic Product

The estimates of real GDP used in the derivation of the ABS labour productivity statistics are annually reweighted chain Laspeyres volume measures. The concepts and definitions used in deriving chain volume estimates are explained in Chapter 6 of [Australian National Accounts: Concepts, Sources and Methods \(/statistics/detailed-methodology-information/concepts-sources-methods/australian-system-national-accounts-concepts-sources-and-methods/2020-21/chapter-6-price-and-volume-measures\)](#).

Gross Domestic Product per hour worked

In Australian National Accounts: National Income, Expenditure and Product and Australian System of National Accounts the term 'GDP per hour worked' (and similar terminology for the industry statistics) is generally used in preference to 'labour productivity' because:

- the term is more self-explanatory; and
- the measure does not attribute change in GDP to specific factors of production.

Occupational injuries and diseases

From its inception, the International Labour Organisation (ILO) recognised the importance of establishing an adequate statistical basis for the measurement and analysis of work related hazards and risks. Recommendations on the concepts associated with those statistics were made at the first, sixth, tenth, thirteenth and sixteenth (1998) International Conferences of Labour Statisticians (ICLS). Recommendations of the sixteenth ICLS are described in this section, along with sources of occupational injuries and diseases data available for Australia.

Concepts and international guidelines

An occupational injury is defined as:

"...any personal injury, disease or death resulting from an occupational accident."

An occupational disease is defined as:

"...a disease contracted as a result of an exposure over a period of time to risk factors arising from work activity."

[International Labour Organization, 16th ICLS, 1998 \(https://ilostat.ilo.org/about/standards/icls/\)](https://ilostat.ilo.org/about/standards/icls/)

The following terms, used when measuring the nature and incidence of occupational injuries, were also defined by the sixteenth ICLS:

- occupational accident - an unexpected and unplanned occurrence, including acts of violence, arising out of or in connection with work, which results in one or more workers incurring a personal injury or death;
- commuting accident - an accident resulting in death or injury which occurs on the habitual route, in either direction, between the place of work or work-related training and: (1) the worker's residence; (2) the place where the worker usually takes meals; or (3) the place where the worker usually receives remuneration; and
- incapacity for work - the inability of a worker, due to an occupational injury, to perform the normal duties or tasks of the job occupied at the time of the accident.

The sixteenth ICLS made recommendations in relation to the coverage of statistics on occupational injuries and the types of information countries should aim to collect. Data should be collected for all of the occupational injuries defined above, for both fatal and non-fatal injuries, which cause an absence of work of at least one day (excluding the day of the accident). The statistics should cover all workers regardless of their status in employment (e.g. employees, employers and own-account workers), as well as child workers, informal sector workers and home workers.

The measurement unit recommended to be used for statistics on the nature and incidence of occupational injuries should be the 'case of occupational injury'. If a person is injured in more than one occupational accident during the reference period, each case of injury to that person should be separately counted. The sixteenth ICLS also recommended that data should be collected on: the enterprise, establishment or local unit; the person injured; the injury; and the accident and its circumstances.

Australian collections and definitions

In Australia, statistics on occupational injuries and diseases are available from household surveys conducted by the ABS, and administrative records of state, territory and Australian compensation authorities compiled by Safe Work Australia.

ABS Household Surveys

The main ABS statistics relating to the incidence of occupational injury and disease are available from the Work-related injuries topic on the Multipurpose Household Survey (MPHS) (see the section relating to the MPHS in this publication). The survey covers injuries sustained by all categories of employed workers, including injuries that have been claimed under workers' compensation and injuries that have not been claimed under workers' compensation. It excludes work-related illnesses or injuries resulting in death.

While the terminology used in the Work-related injuries survey topic ('work-related injuries') differs from that used in the international standards, the underlying definitions are broadly consistent with those recommended by the ICLS. The survey has not sought to distinguish between 'work-related illnesses', 'work-related injuries' or 'work-related injuries sustained on journeys to or from work'. Instead, it broadly defines work-related injuries as illnesses or injuries sustained as a result of work activities, on a journey to or from work, or the aggravation of pre-existing conditions where employment was a contributory factor.

Some data are also available from the Australian Health Survey, which collects information about recent illnesses and long term conditions and whether they are work-related. For more information on survey content and methodology, see the [Australian Health Survey: Users' Guide, 2011-13 \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/4363.0.55.001\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/4363.0.55.001).

Safe Work Australia's National Data Set for Compensation-based statistics

Safe Work Australia's National Data Set (NDS) for Compensation-based Statistics is a standard set of data items, concepts and definitions for inclusion in workers' compensation systems operating in Australia, and enables the production of national and nationally comparable workers' compensation-based data. It is compiled from compensable injuries and diseases made under the state, territory and Australian Government worker's compensation Acts, and as such only covers compensable injuries and diseases (not information on workers not covered for workers' compensation, or who choose not to make a claim).

The NDS is supported by several classification systems, including the Australian and New Zealand Standard Industrial Classification

(ANZSIC), the Australian and New Zealand Standard Classification of Occupations (ANZSCO) and the Type of Occurrence Classification System (TOOCS). TOOCS is central to NDS. It consists of hierarchical classifications for the nature, bodily location, mechanism, breakdown agency and agency of injury or disease.

Definitions of occupational injuries and occupational diseases used in the NDS are consistent with international standards. These definitions are:

- Occupational injuries - all employment related injuries which are the result of a single traumatic event occurring while a person is on duty or during a recess period, and where there was a short or non-existent latency period. This includes injuries which are the result of a single exposure to an agent(s) causing an acute toxic effect.
- Occupational diseases - all employment related diseases which result from repeated or long-term exposure to an agent(s) or event(s), or which are the result of a single traumatic event where there was a long latency period (for example, the development of hepatitis following a single exposure to the infection).

The NDS coverage of workers' compensation claims is consistent with international standards, except for:

- occupational injuries of self-employed persons (note: the definition of self-employed workers varies across jurisdictions and is not necessarily consistent with ABS definitions);
- occurrences covered under separate legislation for specific groups of workers;
- occurrences where the workers' compensation claims are pending, in dispute, withdrawn or rejected; and
- occurrences not claimed as workers' compensation.

The type and level of detail of the information to be collected for each claim is consistent with international standards and include:

- employer description - industry, size of business;
- employee characteristics - date of birth, sex;
- job characteristics - occupation, duty status (e.g. at work, commuting, away from work), number of hours usually worked each week, normal weekly earnings, labour hire indicator, apprentice/trainee indicator;
- occurrence details - date of occurrence/report, nature of injury/disease, bodily location of injury/disease, mechanism of injury/disease, agency of injury/disease, breakdown agency of injury/disease; and
- outcome of incident - time lost, severity indicator, payments made.

More information on the NDS and workers' compensation data is available from [Safe Work Australia](https://www.safeworkaustralia.gov.au/doc/national-dataset-compensation-based-statistics-3rd-edition-revision-1) (<https://www.safeworkaustralia.gov.au/doc/national-dataset-compensation-based-statistics-3rd-edition-revision-1>).

Classifications used in labour statistics

Classifications group and arrange statistics into a coherent and standard structure. They are used for compilation and analysis, and to facilitate comparison with other statistical series. This section briefly outlines a number of standard economic, socio-demographic, and geographic classifications used to aggregate labour statistics.

A range of socio-demographic data is available from labour-related household collections. Standard classifications used in the presentation of labour statistics include age, sex, birthplace, marital status, families and households, schooling and educational qualifications, language, and Aboriginal and Torres Strait Islander status. Statistical standards for social and demographic variables have been developed by the ABS and are described in Family, Household and Income Unit Variables.

Occupation

The occupation classification used in Australian Bureau of Statistics (ABS) surveys is the Australian and New Zealand Standard Classification of Occupations (ANZSCO). ANZSCO is a skill-based classification of occupations which covers all jobs in the Australian and New Zealand workforce. Occupation information collected in surveys and the Census provides a description of a person's job, and refers to the kind of work undertaken by an employed person irrespective of the industry in which that job is held. Jobs and occupations are fundamental concepts to the classification. A job is a set of tasks designed to be performed by one individual for an employer, whereas an occupation is a set of jobs with similar sets of tasks. Occupations are classified according to two criteria - skill level and skill specialisation.

Skill level is a function of the range and complexity of the set of tasks involved. A greater range and complexity of tasks leads to a higher skill level of the occupation. The criteria used in ANZSCO to measure skill level are the formal education and/or training, previous experience and on-the-job training usually required to competently perform the set of tasks required for that occupation.

Skill specialisation of an occupation is based on the field of knowledge required, tools and equipment used, materials worked on, and goods or services provided in relation to the tasks performed. Skill specialisation is used to group occupations according to type, rather than level of skill.

The structure of ANZSCO comprises five hierarchical levels: Major Groups (the broadest level), Sub-Major Groups, Minor Groups, Unit Groups and Occupations (the finest level). The Major Groups are distinguished from each other on the basis of skill level, and, where necessary, the broad concept of skill specialisation. The eight Major Groups are:

1. Managers;

2. Professionals;
3. Technicians and trades workers;
4. Community and personal service workers;
5. Clerical and administrative workers;
6. Sales workers;
7. Machinery operators and drivers; and
8. Labourers.

The sub-major group, minor group, unit group and occupation levels provide increasingly detailed dissections of the broad categories. For further information see [ANZSCO - Australian and New Zealand Standard Classification of Occupations, 2013, Version 1.3](https://www.abs.gov.au/AUSSTATS/abs@.nsf/productsbyCatalogue/FCC055588D3EBA19CA2584A8000E7889?OpenDocument) (<https://www.abs.gov.au/AUSSTATS/abs@.nsf/productsbyCatalogue/FCC055588D3EBA19CA2584A8000E7889?OpenDocument>).

Occupation data are available from the Labour Force Survey (LFS) quarterly, a number of supplementary topics to the LFS, most Special Social Surveys, the five-yearly Census of Population and Housing, and employer surveys such as the Survey of Employee Earnings and Hours (EEH).

Full-time/part-time status

The notion of what constitutes a standard full-time working week has required continual re-examination over several decades with the progressive decline in standard hours of work, accompanied by substantial growth in the number of persons employed under part-time working arrangements.

In the absence of any internationally accepted definition of full-time work, two approaches have been taken in various countries. The first is objective and is based on the number of hours worked. This approach is relatively simple to apply without requiring the respondent to know details about their contractual arrangements on hours worked, but provides no flexibility to accommodate variations in 'normal' hours of work in different industries and occupations. The second is more subjective and involves classifying workers as full-time or part-time based on the self-assessment of the person concerned, irrespective of the number of hours actually worked. The self-assessment approach does accommodate such differences but is based solely on self-perception, and its accuracy is dependent on respondents' knowledge of whether they work full-time or part-time in their activity. Both approaches are used in ABS surveys, with ABS household surveys primarily using the hours based method since 2003. For further detail on hours worked, see the section: Hours of Work.

ABS Household Surveys

The approach used in the LFS and adopted in many other ABS household surveys is to define full-time and part-time status in terms of hours worked. The definition used in the LFS and related surveys designates full-time workers as persons who (a) usually work 35 hours or more per week in all jobs, or (b) although usually working less than 35 hours a week, actually worked 35 hours or more during the survey reference week. Part-time workers are those who usually work less than 35 hours per week, and either did so during the reference week, or were not at work in the reference week. Under this definition, persons with more than one job are defined as full-time if they work 35 hours or more across all of their jobs.

The approach based on respondents' perception of their full-time or part-time status is used in some supplementary topics to the LFS, for example Participation, Job Search and Mobility Survey (PJSM) (see the relevant survey under the section: Labour Force Supplementary Surveys). This approach is most often used where information is sought about work that is not currently being undertaken, and where recall problems may be encountered using a more objective approach (e.g. for jobs held 12 months prior to the survey date).

Full-time/part-time status is available from most ABS labour-related household surveys including: the monthly LFS; labour-related supplementary topics to the monthly LFS; various Special Social Surveys; and the Census of Population and Housing.

The precise definition used in different collections varies, so please refer to the explanatory material for specific collections. For example, in the Census full-time/part-time status is based on actual hours worked in the week prior to the Census.

ABS Business Surveys

In ABS business surveys, the classification of employee jobs as full-time is based on whether normal hours are equal to, or greater than, what has been agreed to as being full-time under the relevant award or agreement (i.e. normal hours). If there are no agreed or award hours associated with the job, then it is classified as full-time where the usual hours of work per week are 35 or more. Part-time jobs are those which are not full-time. The full-time/part-time status classification is used in the the EEH and AWE surveys.

Managerial/non-managerial status

Managerial employees are defined as those who have strategic responsibilities in the conduct or operations of the organisation, and/or are in charge of a significant number of employees. They do not usually have overtime payment entitlements. Jobs occupied by professionally qualified persons are defined as managerial only if the occupant primarily performs managerial tasks. Jobs occupied by working proprietors of incorporated businesses (also referred to as owner-managers of incorporated enterprises) are considered managerial. Non-managerial employee jobs include clerical staff, tradespersons, non-managerial professionals, apprentices, trainees and cadets.

Care should be taken when comparing estimates based on ANZSCO groups with estimates based on the managerial status of employees. Jobs with managerial status include those classified to ANZSCO categories other than the ANZSCO major group Managers, e.g. Professionals according to ANZSCO may be categorised as having managerial status. Conversely, estimates for non-managerial jobs include some employees classified to the ANZSCO major group Managers.

The managerial/non-managerial classification is only available from the EEH.

Adult/junior status

The adult/junior classification is mainly available from ABS labour-related business surveys. In these surveys, adults are defined as employees aged 21 years or over, and employees who are paid at the adult rate regardless of their age (employees aged under 21 may be paid at the full adult rate for their occupation). Juniors are employees aged less than 21 years who are not paid at the adult rate of pay for their occupation. The adult/junior classification is available from the EEH survey. The AWE survey produces estimates relating to full-time adult jobs.

Industry

An industry classification provides a framework which enables the grouping of businesses which carry out similar productive activities. The Australian and New Zealand Standard Industrial Classification 2006 (ANZSIC) is the standard industry classification used in Australia for the collection, compilation and publication of statistics by industry. It closely aligns with the [International Standard Industrial Classification of All Economic Activities](https://unstats.un.org/unsd/classifications/Econ/Download/In%20Text/CPCprov_english.pdf) (https://unstats.un.org/unsd/classifications/Econ/Download/In%20Text/CPCprov_english.pdf) (ISIC), Revision 4, adopted by the United Nations Statistical Commission.

The ANZSIC has a hierarchical structure comprising four levels: Divisions (the broadest level), Subdivisions, Groups and Classes (the finest level). At the divisional level, the main purpose is to provide a limited number of categories for a broad overall picture of the economy and used for publication in summary tables. There are 19 divisions within the ANZSIC, each identified by a letter from A to S:

- a. Agriculture, Forestry and Fishing
- b. Mining
- c. Manufacturing
- d. Electricity, Gas, Water and Waste Services
- e. Construction
- f. Wholesale Trade
- g. Retail Trade
- h. Accommodation and Food Services
- i. Transport, Postal and Warehousing
- j. Information Media and Telecommunications
- k. Financial and Insurance Services
- l. Rental, Hiring and Real Estate Services
- m. Professional, Scientific and Technical Services
- n. Administrative and Support Services
- o. Public Administration and Safety
- p. Education and Training
- q. Health Care and Social Assistance
- r. Arts and Recreation Services
- s. Other Services

The Subdivision, Group and Class levels provide increasingly detailed dissections of these categories for the compilation of specific and detailed statistics. For further information see [Australian and New Zealand Standard Industrial Classification 2006](https://www.abs.gov.au/AUSSTATS/abs@.nsf/productsbyCatalogue/D249EC2A7DC203BACA257B9500133E91?OpenDocument) (<https://www.abs.gov.au/AUSSTATS/abs@.nsf/productsbyCatalogue/D249EC2A7DC203BACA257B9500133E91?OpenDocument>).

Our [Industry employment guide](https://statistics/understanding-statistics/guide-labour-statistics/industry-employment-guide) ([/statistics/understanding-statistics/guide-labour-statistics/industry-employment-guide](https://statistics/understanding-statistics/guide-labour-statistics/industry-employment-guide)) provides summary information about our industry employment measures, their purpose and how to use them.

Sector

There are a number of standard classifications which group the national economy into broad economic sectors. These sector classifications enable information to be provided about groups of economic units that have similar functions or institutional characteristics; for example, households, corporations or government units. The most relevant sector classifications for labour statistics are the Public/Private and Level of Government classifications. Other sector classifications include the Standard Economic Sector Classification of Australia (SESCA), Not for Profit, and Type of Legal Organisation. These are used within economic statistics. Sector classifications are described within the [Standard Economic Sector Classifications of Australia \(SESCA\), 2008](https://www.abs.gov.au/statistics/classifications/standard-economic-sector-classifications-australia-sesca/latest-release) (<https://www.abs.gov.au/statistics/classifications/standard-economic-sector-classifications-australia-sesca/latest-release>).

Public/private sector

The public/private classification is used to identify whether an enterprise is a public or private unit.

The public sector includes:

- Financial corporations controlled by government;
- Government agencies, Government departments;
- Non-financial corporations controlled by government;
- Notional institutional units controlled by government;
- Public financial corporations; and
- Public non-financial corporations.

The private sector includes:

- Household institutional units;
- Not-for-profit institutions;
- Private corporations;
- Private notional institutional units;
- Superannuation funds for public sector employees; and
- Unincorporated enterprises.

Level of government

The level of government classification is based on the economic function, or role, of public sector units, and enables identification of public sector units by the level of government in which they operate. The classification has the following structure:

- National (or Commonwealth) Government;
- State/Territory Government; and
- Local government.

Note that when a public sector unit cannot be defined unambiguously as under the control of a single government, that unit will be classified to the level of government which typically has that role or function.

Marital status

Marital status is a core variable in a wide range of social, labour and demographic statistics, and is almost universally collected in ABS household collections. Its main purpose is to establish the living arrangements of couples in the Australian population. These living arrangements may be based on a legal concept (i.e. registered marriage), or a social, marriage-like arrangement (i.e. de facto marriage). Two separate concepts of marital status are measured, Registered Marital Status and Social Marital Status. These are discussed briefly below.

Registered marital status

Registered marital status is a person's relationship status in terms of whether he or she has, or has had, a registered marriage with another person for whom he or she holds, or held, a valid marriage certificate. Persons may be distinguished as:

- Never married;
- Widowed;
- Divorced;
- Separated; or
- Married.

Social marital status

Social marital status of an individual describes their relationship to another person who is usually resident in the household, regardless of whether the relationship is formalised through marriage registration. A social marriage exists when two persons live together as husband and wife, or partners, and individuals are regarded as married if they are in a de facto marriage, or if they are living with the person to whom they are registered as legally married. Persons may be distinguished as:

- Registered marriage;
- De facto marriage; or
- Not married.

For additional information on marital status, see [Labour Force Survey Standard Products and Data Item Guide \(/statistics/standards/labour-force-survey-standard-products-and-data-item-guide/latest-release\)](https://www.abs.gov.au/statistics/standards/labour-force-survey-standard-products-and-data-item-guide/latest-release).

Families and households

The concepts of families and households are fundamental in the collection and dissemination of both social and labour statistics. A household can be thought of, in its broadest sense, as a group of persons who live and eat together as a single unit within a household. Notions of what constitutes a family vary. However, for statistical purposes it is defined within ABS collections as two or more related (by blood, marriage, adoption, step or fostering) persons, one of whom is at least 15 years of age, who are usually resident in the same household. Households and families constitute the basic groups of social aggregation. While the concept of household is broader than the

concept of family, in practice both often refer to the same set of persons. Classifications relating to Household Composition, Relationship in Household, Family Composition and Relationship between families are discussed briefly below. For further information see [Family, Household and Income Unit Variables \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/productsbyCatalogue/CF63EA0D2C0016C2CA2572AE00227E7E?OpenDocument\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/productsbyCatalogue/CF63EA0D2C0016C2CA2572AE00227E7E?OpenDocument).

Household Composition

Household Composition is used to describe and categorise households on the basis of the number of families present, whether or not non-family members are present (family households only), and the number of household members (non-family households only). The standard Household Composition classification is:

- One family household
 - One family household with only family members present
 - One family household with non-family members present
- Multiple family household
 - Two family household
 - Two family household with only family members present
 - Two family household with non-family members present
 - Three or more family household
 - Three or more family household with only family members present
 - Three or more family household with non-family members present
- Non-family household
 - Lone person household
 - Group household

Relationship in Household

Relationship in Household describes the familial and non-familial relationship of each person within each family in a given household. The familial relationship within each family is measured with reference to a family reference person chosen for that particular family.

The Relationship in Household classification has a four level hierarchical structure: major group and detailed minor groups. The major groups are distinguished from each other in terms of the presence or absence of residency, family membership, and relationship to reference person within the household. The major groups are:

- Husband, wife or partner
- Lone parent
- Child under 15
- Dependent student
- Non-dependent child
- Other related individual
- Non-family member
- Lone person
- Not living alone.

The minor groups provide more detailed information about the relationship within the household. For example, a child under 15 years of age is further classified as being: a natural or adopted child; a step child; a foster child; grandchild; an otherwise related child; or an unrelated child.

Family Composition

Statistics on family type are used to identify family structures, and are used extensively in measures of the social wellbeing of the family unit and the individuals within those families. Operationally a family is defined as two or more persons, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering, and who are usually resident in the same household. The basis of a family is formed by identifying the presence of a couple relationship, lone parent-child relationship, or other blood relationship. Some households will, therefore, contain more than one family.

The Family Composition classification has a four level hierarchical structure. The groups at the highest level are distinguished from each other on the presence or absence of a couple relationship, parent-child relationship, or other blood relationship. The four groups are:

- Couple family with no children
- Couple family with children
- One parent family
- Other family

The remaining three levels provide increasingly detailed dissections of the broad categories, based on the presence or absence of children aged less than 15 years, dependent students and non-dependent children. In addition to the four distinct levels, information about the 'type of couple' is provided to distinguish the sex of partners in couple relationships, to support analysis of family composition change

over time:

- Opposite-sex couple
- Same-sex male couple
- Same-sex female couple

Education

The standard classification of educational activity, the Australian Standard Classification of Education (ASCED), was released in 2001.

The ASCED has been developed to classify educational activity by the level and field of the activity. It also provides the flexibility to report statistics on different aspects of education such as enrolments, resources (human and financial) used, or the educational attainment of the population. ASCED has been designed to be applied to a number of education-related concepts, such as a 'qualification', a 'unit of study', a 'module' or a 'course'. The classification includes all pre-primary, primary and secondary school education, as well as all formal non-school education and training. ASCED classifies education according to two elements: level of education; and field of education. These elements are described below and can be used separately or in combination. For further information, refer to [Information Paper: Australian Standard Classification of Education \(ASCED\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/productsbyCatalogue/5B3D60B6F0F19A8CCA2570B300057E41?OpenDocument) (<https://www.abs.gov.au/AUSSTATS/abs@.nsf/productsbyCatalogue/5B3D60B6F0F19A8CCA2570B300057E41?OpenDocument>).

Level of education

Level of education is a function of the quality and quantity of learning associated with an educational activity, and is assessed in terms of the following criteria: the theoretical and vocational orientation of the educational activity; the minimum entry requirements for the educational activity (i.e. the minimum amount of prior education needed to undertake the educational activity at that level); and the course length (or notional duration of the educational activity).

The level of education classification has nine broad levels:

- Postgraduate Degree Level
- Graduate Diploma and Graduate Certificate Level
- Bachelor Degree Level
- Advanced Diploma and Diploma Level
- Certificate Level
- Secondary Education
- Primary Education
- Pre-Primary Education
- Other Education

Field of education

Field of education refers to the subject matter included in an educational activity. Fields of education are related to each other through the similarity of subject matter, through the broad purposes for which the study is undertaken, and through the theoretical content which underpins the subject matter. Fields of education are classified into progressively broader groups according to the following criteria: the theoretical content of the course; the purpose of learning; the objects of interest; the methods and techniques; and the tools and equipment.

The Field of Study Classification consists of three hierarchical levels; Broad Field; Narrow Field; and Detailed Field. The detailed fields aggregate into narrow fields and the narrow fields in turn aggregate into broad fields. The 12 Broad Field categories are:

- Natural and Physical Sciences
- Information Technology
- Engineering and Related Technologies
- Architecture and Building
- Agriculture, Environmental and Related Studies
- Health
- Education
- Management and Commerce
- Society and Culture
- Creative Arts
- Food, Hospitality and Personal Services
- Mixed Field Programmes

Language variables

The development of Australia as a multicultural society and the subsequent wider interest in constructing statistical profiles of particular ethnic or cultural population groups has, over the years, increased the use of and need for quality language data. To meet these growing needs, the ABS has incorporated language questions in a range of social statistics collections. Variables collected include 'main language spoken at home', 'first language spoken', and 'proficiency in spoken English'.

Languages are classified according to the [Australian Standard Classification of Languages \(ASCL\)](https://www.abs.gov.au/statistics/classifications/australian-standard-classification-languages-ascl/latest-release) (<https://www.abs.gov.au/statistics/classifications/australian-standard-classification-languages-ascl/latest-release>), and readers should refer to this publication for more information about what constitutes a language, as well as for further information on the classification itself.

Questions on 'proficiency in spoken English' are asked only of persons who speak languages other than English at home, or whose first language spoken was other than English. Respondents are asked to classify themselves as speaking English: very well; well; not well; or not at all.

Indigenous status

Accurate and consistent statistics about Aboriginal and Torres Strait Islander peoples are needed in order to plan, promote and deliver essential services, to monitor changes in well-being and to account for government expenditure in this area. The 'Commonwealth working definition' of an Aboriginal or Torres Strait Islander is "a person of Aboriginal or Torres Strait Islander descent, who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he or she lives". In ABS statistical collections, it is not feasible to collect information on the community acceptance part of this definition, and therefore questions on Aboriginal and Torres Strait Islander Status relate to descent and self-identification only. In practice, persons are asked if they are of Aboriginal or Torres Strait Islander origin.

The classification for Aboriginal and Torres Strait Islander Status has a hierarchical structure comprising two levels. There are four categories at the detailed level of the classification (see below), which are grouped into two categories at the broader level. There is one supplementary category. Statistics are often only available at the broad levels of the classification. For further information, refer to [Indigenous Status Standard \(/statistics/standards/indigenous-status-standard/latest-release\)](/statistics/standards/indigenous-status-standard/latest-release):

- Aboriginal but not Torres Strait Islander Origin
- Torres Strait Islander but not Aboriginal Origin
- Both Aboriginal and Torres Strait Islander Origin
- Neither Aboriginal nor Torres Strait Islander Origin.

Statistical geography and maps

Australian Statistical Geography Standard (ASGS)

The ASGS brings together all Australian regions on which the ABS publishes statistics within the one framework. It was used for the 2011 Census of Population and Housing, and introduced into ABS labour collections from mid-2013. The ASGS replaced the Australian Standard Geographical Classification (ASGC).

The ASGS classification structures are split into two broad groups, the ABS Structures and the Non-ABS Structures. The ABS Structures are hierarchies of regions defined and maintained by the ABS. The Non-ABS Structures are hierarchies of regions which are not defined or maintained by the ABS, but for which the ABS is committed to providing a range of statistics. They generally represent administrative units such as Postcode and Local Government Areas. The ABS Structures are built directly from Mesh Blocks. Non-ABS Structures are approximated by either Mesh Blocks, the Statistical Areas Level 1 (SA1s) or the Statistical Areas Level 2 (SA2s).

The ABS Structures comprise six interrelated hierarchies of regions. They are:

- Main Structure
- Indigenous Structure
- Urban Centres and Localities/Section of State Structure
- Remoteness Area Structure
- Greater Capital City Statistical Area (GCCSA) Structure
- Significant Urban Area Structure.

Under the main structure, Statistical Area Level 4 (SA4) regions are the largest sub-State regions in the ASGS and are used for the release of Labour Force Statistics. They are designed for the output of labour force data, and reflect labour markets within each State and Territory within the population limits imposed by the Labour Force Survey (LFS) sample.

The Non-ABS Structures comprise eight hierarchies of regions. They are:

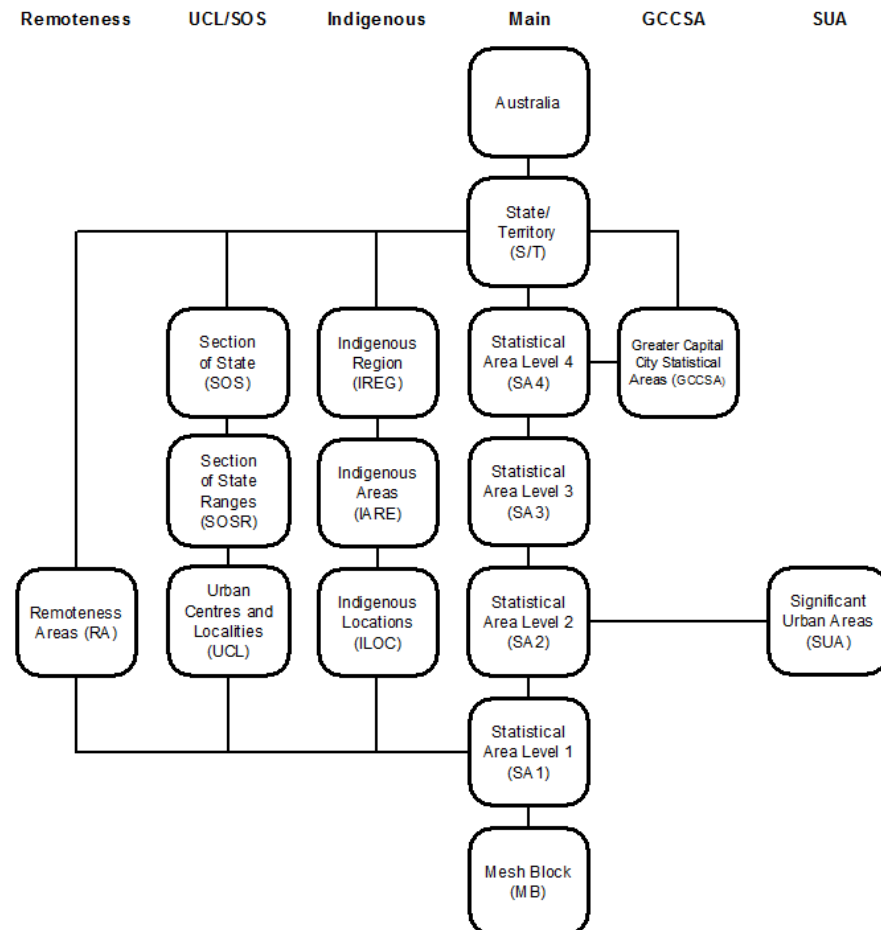
- Local Government Areas (LGAs)
- Postal Areas
- State Suburbs
- Commonwealth Electoral Divisions
- State Electoral Divisions
- Australian Drainage Divisions
- Natural Resource Management Regions
- Tourism Regions

The ASGS is constructed on the principle that it must fulfil user needs for spatial statistics while also conforming to general classification principles.

For further information see [Australian Statistical Geography Standard \(ASGS\): Volume 1 - Main Structure and Greater Capital City Statistical Areas \(ASGS\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/productsbyCatalogue/871A7FF33DF471FBCA257801000DCD5F?OpenDocument) (<https://www.abs.gov.au/AUSSTATS/abs@.nsf/productsbyCatalogue/871A7FF33DF471FBCA257801000DCD5F?OpenDocument>).

More detailed information on the ASGS is available from the ABS [Geography portal](https://www.abs.gov.au/websitedbs/D3310114.nsf/home/geography) (<https://www.abs.gov.au/websitedbs/D3310114.nsf/home/geography>).

ASGS structures



Outlines the Australian Statistical Geography Standard (ASGS) Structure which provides a framework of statistical areas used by the Australian Bureau of Statistics (ABS). The ASGS ABS structure depicts the statistical areas and how they interrelate, made up of: Remoteness structure - This divides Australia and the States and Territories into five classes of remoteness on the basis of their relative access to services; Urban Centres and Localities (UCLs), Section of State Structures (SOS) and Section of State Range Structures (SOSR) - The UCLs are defined using aggregations of SA1s which meet population density criteria or contain other urban infrastructure; Indigenous structure - Groups Aboriginal and Torres Strait Islander communities by either small, medium or large; Main Structure - Is made up of mesh blocks (the smallest geographical area defined by the ABS); Greater Capital City Statistical Area Structure (GCCSA) - Are designed to represent the functional extent of each of the State and Territory capital cities; and Significant Urban Areas Structure (SUA) - Represent individual urban centres. SUAs are aggregations of SA2s.

Statistical Areas Level 4 (SA4s) and labour markets

Labour markets were a key consideration in the design of the SA4s, which are the smallest statistical area used for releasing labour force data. Labour force data has two geographic components to it - the labour supply (where people live) and demand (where people work). For statistical purposes, it is ideal to maximise the extent to which the region being analysed contains both sets of geographic locations. Labour markets are geographic regions, which reflect the highest degree of interconnectivity between the labour supply and demand. By reflecting labour markets, the output data are relevant to both labour supply and demand.

SA4s reflect labour markets within each state and territory, within the population limits imposed by the Labour Force Survey sample. They represent labour markets, sub labour markets, or groups of labour markets within each state and territory. Most SA4s have a population above 100,000 persons to provide sufficient sample size for labour force estimates. In regional areas, SA4s tend to have lower populations (100,000 - 300,000). In metropolitan areas, the SA4s tend to have larger populations (300,000 - 500,000).

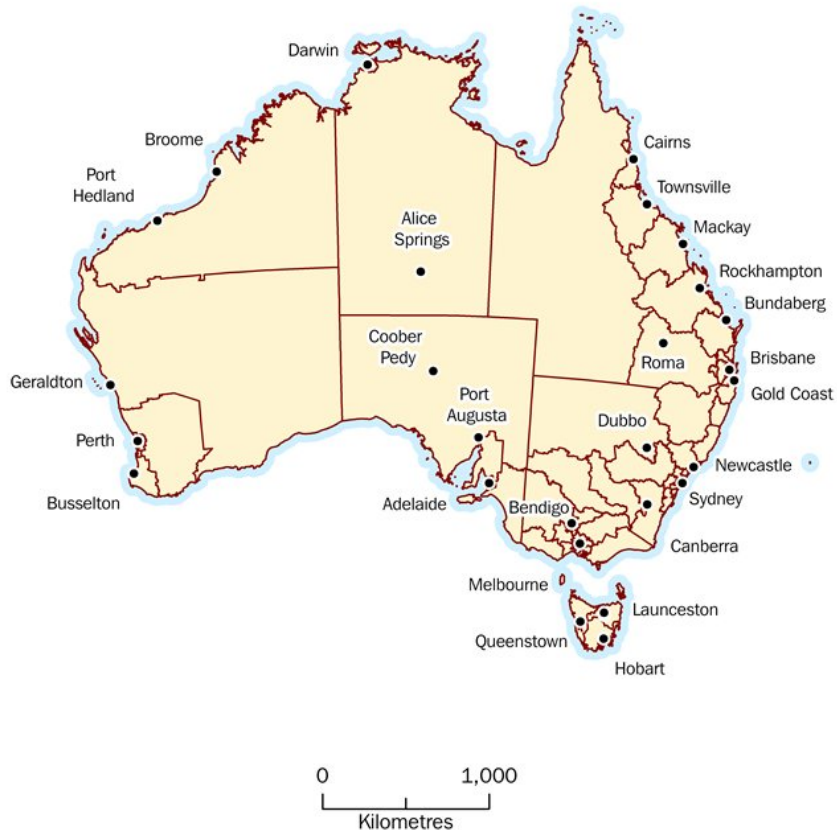
In the 2011 edition of the ASGS there were 107 SA4 regions covering the whole of Australia without gaps or overlaps. These include 18 non-spatial SA4 special purpose codes comprising Migratory-Offshore-Shipping and No Usual Address codes for each state and territory.

In the 2016 edition of the ASGS there are 108 SA4 regions. The changes to the 2016 edition of SA4s were that the Western Australia -

Outback SA4 was split into two SA4s, Western Australia - Outback (North) and Western Australia - Outback (South). Norfolk Island was added to the Other Territories SA4, which also includes Jervis Bay, Cocos (Keeling) Islands and Christmas Island.

From the January 2014 issue of Labour Force, Australia (cat. no. 6202.0), labour force estimates and the regional time series are published under the ASGS. Regional labour force data are currently published for the standard 88 SA4s in the 2011 edition of the ASGS in [Labour Force, Australia, Detailed \(/statistics/labour/employment-and-unemployment/labour-force-australia-detailed/latest-release\)](#). Labour force data is not available below the SA4 level, and is not collected for the 18 special purpose SA4s or the Other Territories SA4.

Example of ABS SA4 boundaries



Displays how Statistical Area Level 4 (SA4s) are specifically designed for the output of Labour Force Survey. These reflect labour markets within each State and Territory, within populations limits imposed by the Labour Force Survey sample. Whole SA4s aggregate to Greater Capital City Statistical Areas (GCCSA) and State and Territory.

Statistical Area Level 4 maps

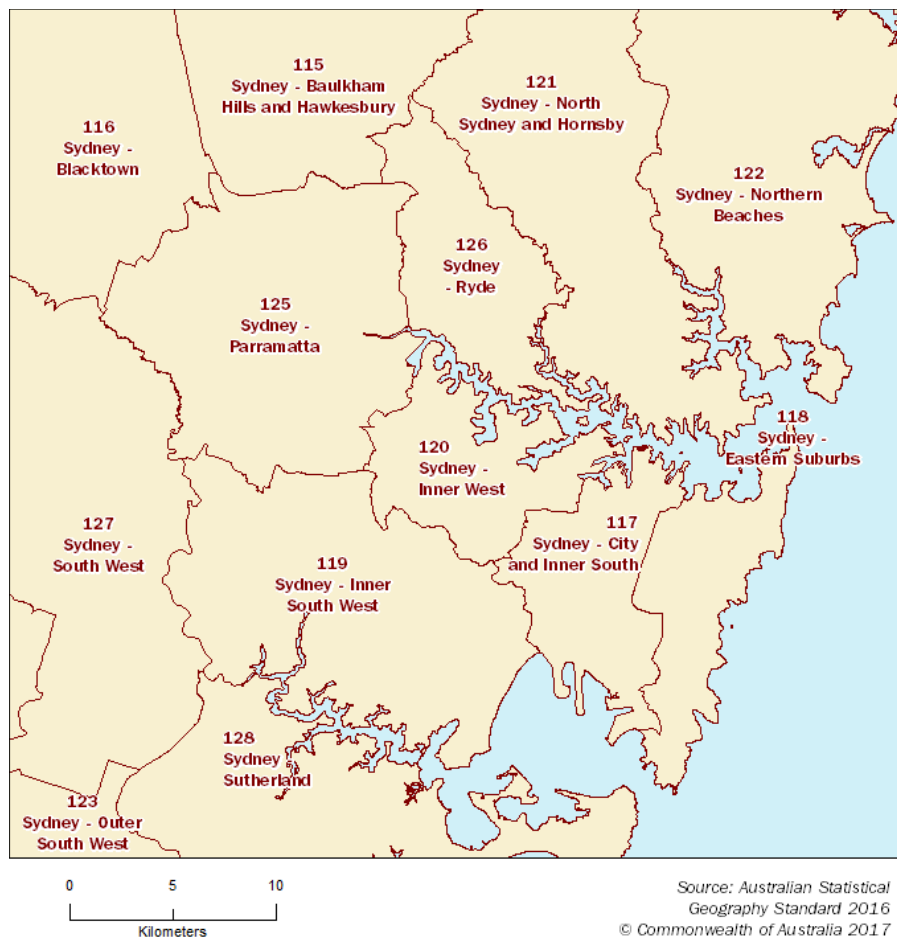
Examples of Statistical Area Level 4 maps are included below.

Statistical Area Level 4 map - New South Wales



Statistical Area Level 4 (SA4s) are specifically designed for the output of Labour Force Survey data. These reflect labour markets within each State and Territory, within populations limits imposed by the Labour Force Survey sample. Whole SA4s aggregate to Greater Capital City Statistical Areas (GCCSA) and State and Territory. This is an example of statistical area level 4 map for New South Wales.

Statistical Area Level 4 map - Sydney



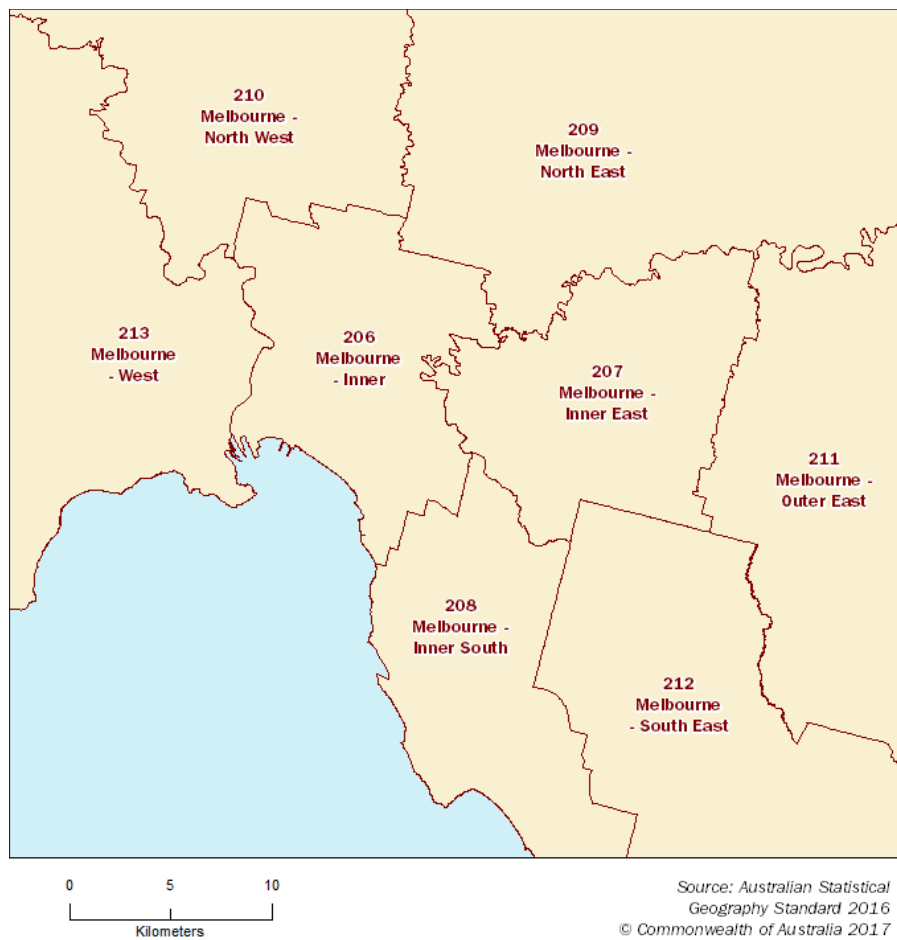
Statistical Area Level 4 (SA4s) are specifically designed for the output of Labour Force Survey. These reflect labour markets within each State and Territory, within populations limits imposed by the Labour Force Survey sample. Whole SA4s aggregate to Greater Capital City Statistical Areas (GCCSA) and State and Territory. This is an example of statistical area level 4 map for Sydney.

Statistical Area Level 4 map - Victoria



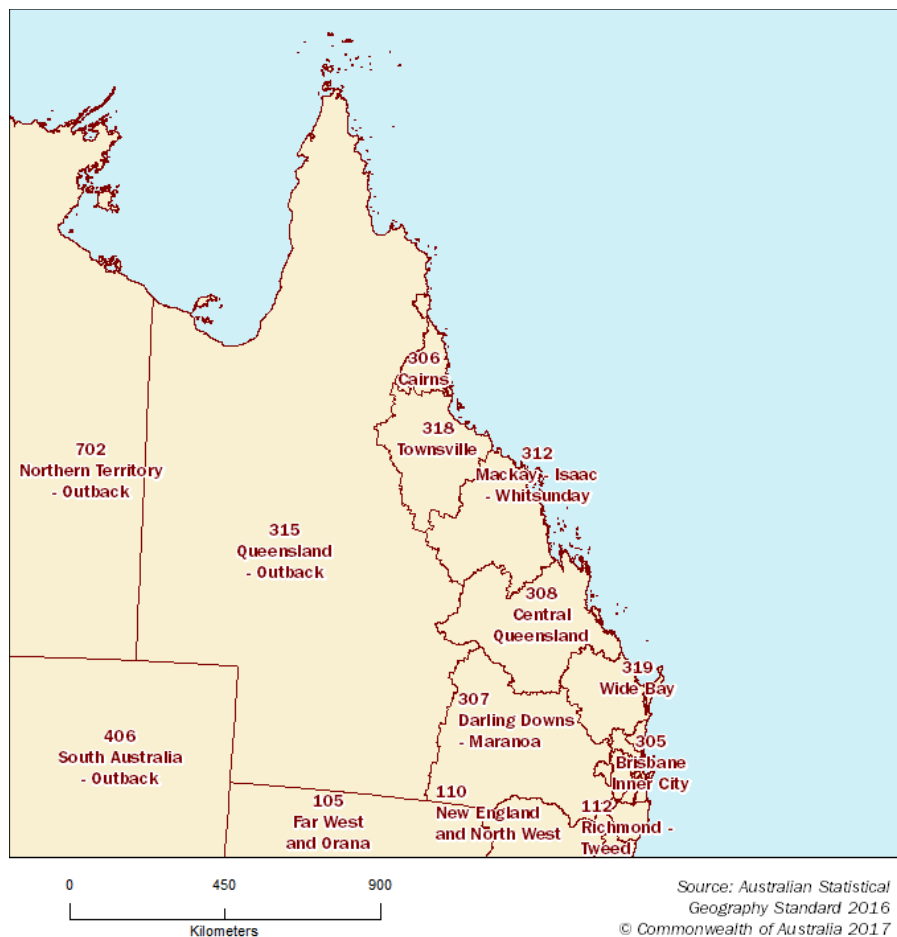
Statistical Area Level 4 (SA4s) are specifically designed for the output of Labour Force Survey. These reflect labour markets within each State and Territory, within populations limits imposed by the Labour Force Survey sample. Whole SA4s aggregate to Greater Capital City Statistical Areas (GCCSA) and State and Territory. This is an example of statistical area level 4 map for Victoria.

Statistical Area Level 4 map - Melbourne



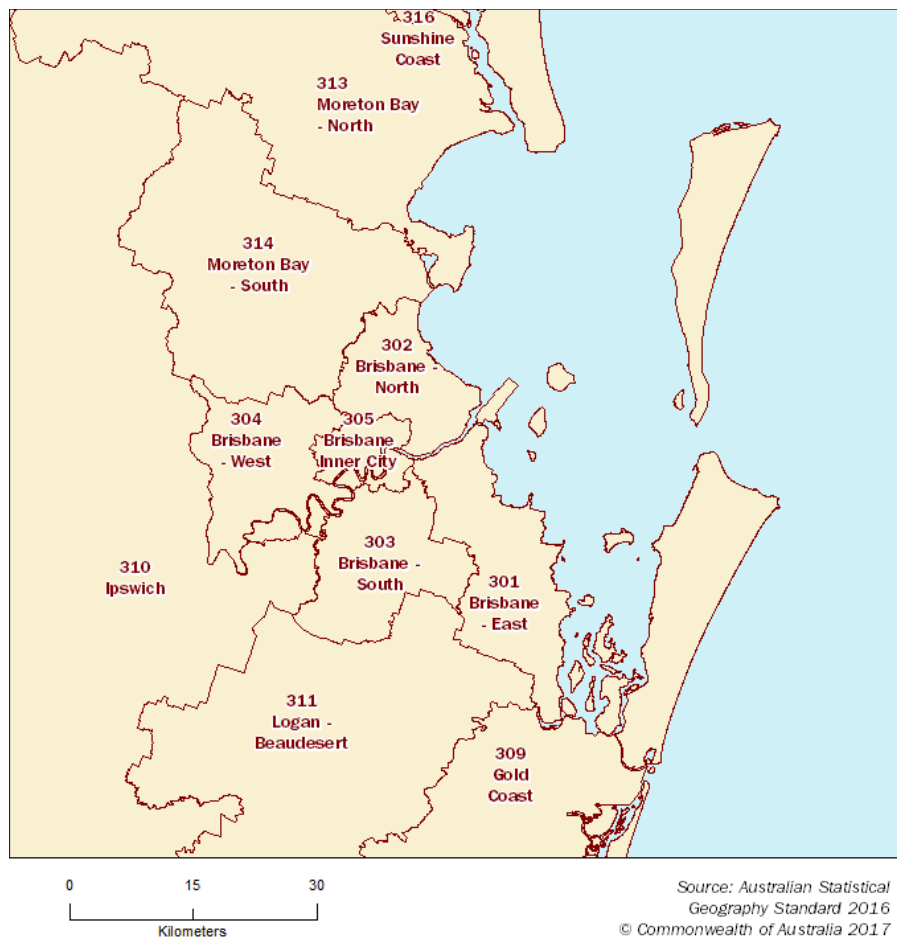
Statistical Area Level 4 (SA4s) are specifically designed for the output of Labour Force Survey. These reflect labour markets within each State and Territory, within populations limits imposed by the Labour Force Survey sample. Whole SA4s aggregate to Greater Capital City Statistical Areas (GCCSA) and State and Territory. This is an example of statistical area level 4 map for Melbourne.

Statistical Area Level 4 map - Queensland



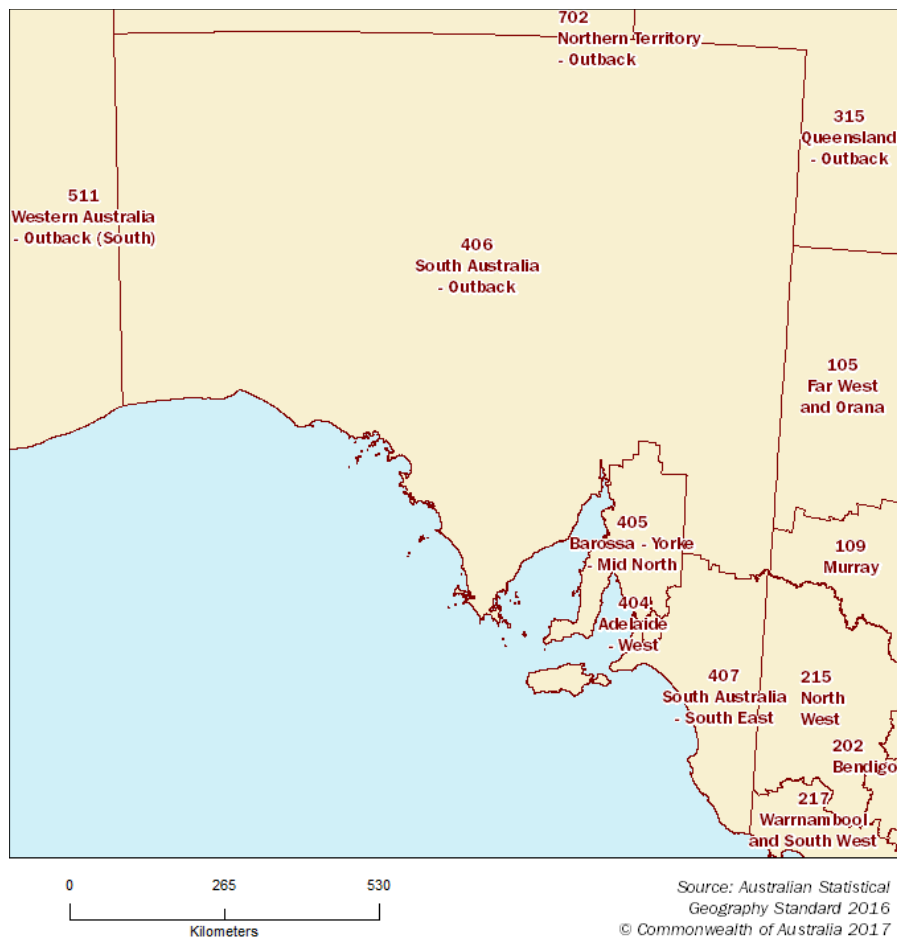
Statistical Area Level 4 (SA4s) are specifically designed for the output of Labour Force Survey. These reflect labour markets within each State and Territory, within populations limits imposed by the Labour Force Survey sample. Whole SA4s aggregate to Greater Capital City Statistical Areas (GCCSA) and State and Territory. This is an example of statistical area level 4 map for Queensland.

Statistical Area Level 4 map - Brisbane



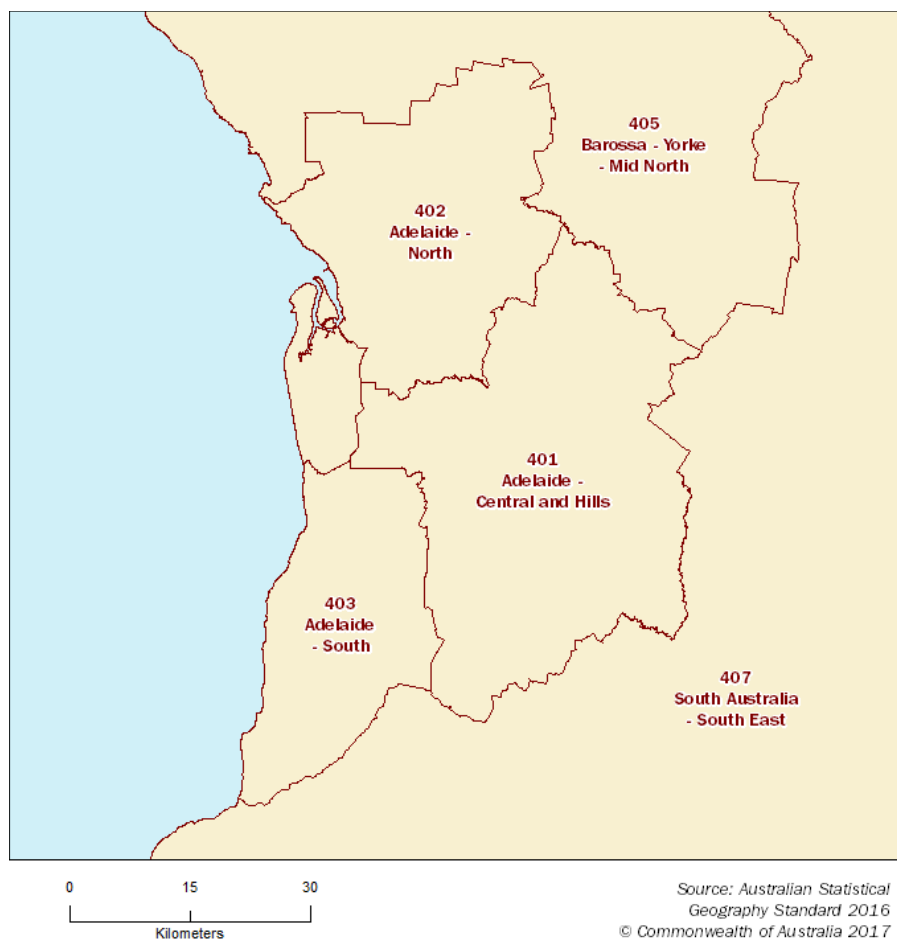
Statistical Area Level 4 (SA4s) are specifically designed for the output of Labour Force Survey. These reflect labour markets within each State and Territory, within populations limits imposed by the Labour Force Survey sample. Whole SA4s aggregate to Greater Capital City Statistical Areas (GCCSA) and State and Territory. This is an example of statistical area level 4 map for Brisbane.

Statistical Area Level 4 map - South Australia



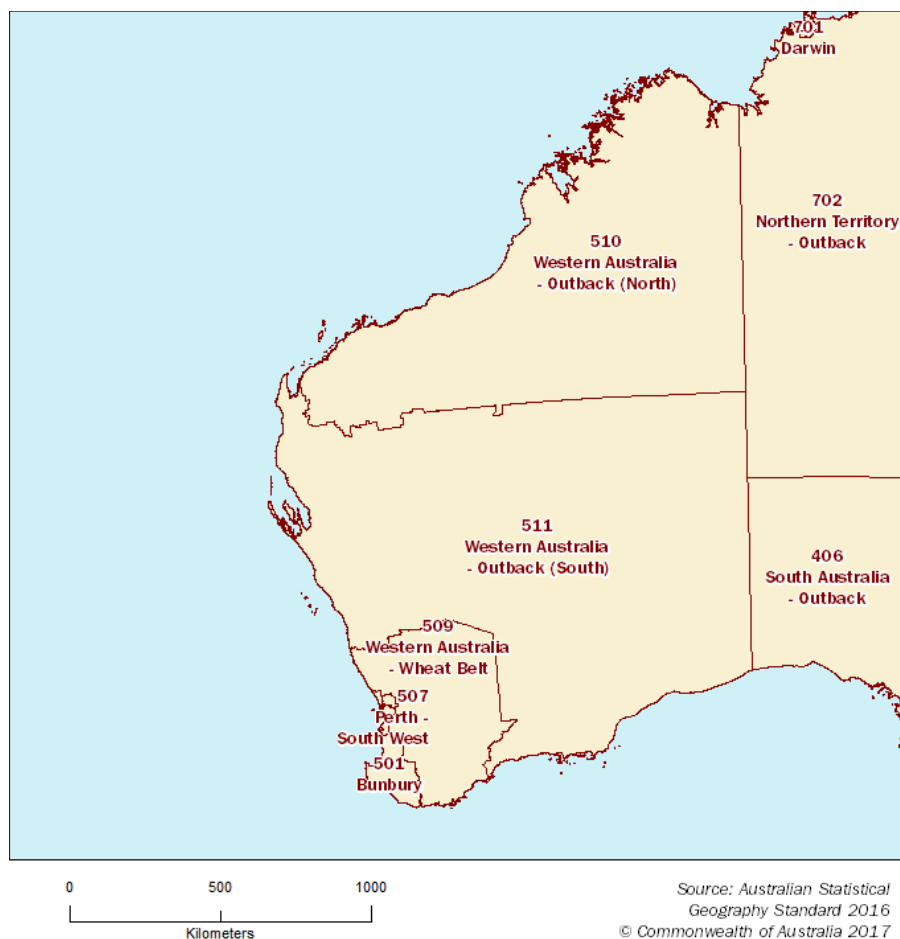
Statistical Area Level 4 (SA4s) are specifically designed for the output of Labour Force Survey. These reflect labour markets within each State and Territory, within populations limits imposed by the Labour Force Survey sample. Whole SA4s aggregate to Greater Capital City Statistical Areas (GCCSA) and State and Territory. This is an example of statistical area level 4 map for South Australia.

Statistical Area Level 4 map - Adelaide



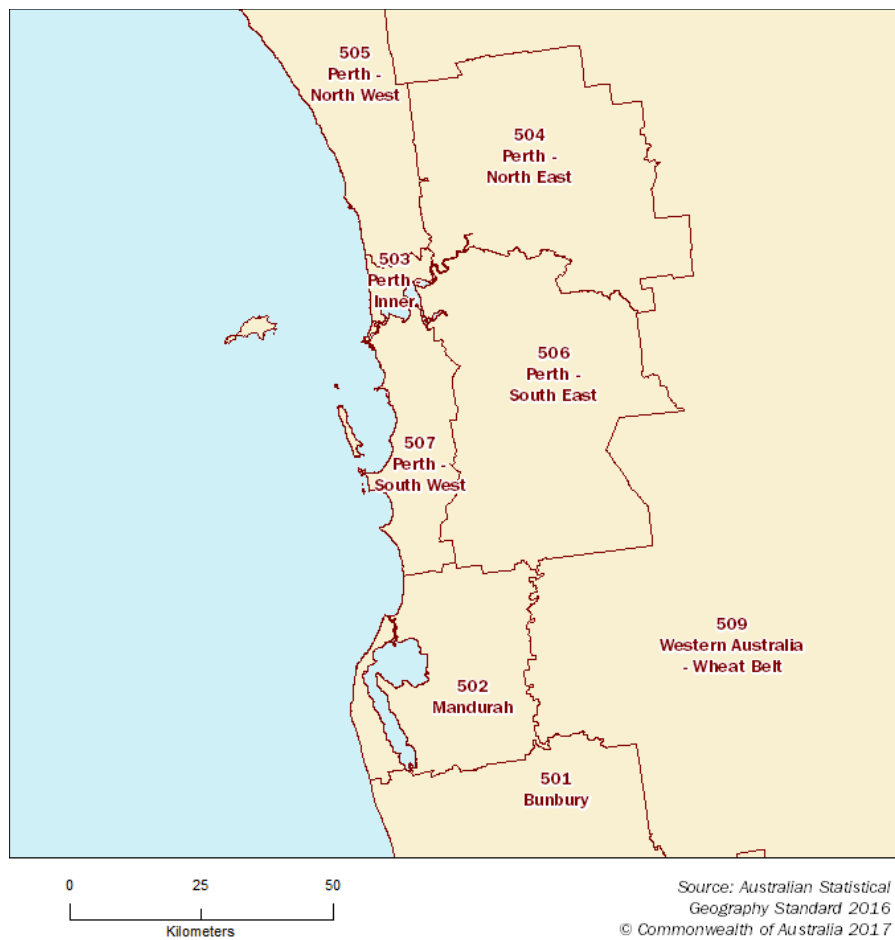
Statistical Area Level 4 (SA4s) are specifically designed for the output of Labour Force Survey. These reflect labour markets within each State and Territory, within populations limits imposed by the Labour Force Survey sample. Whole SA4s aggregate to Greater Capital City Statistical Areas (GCCSA) and State and Territory. This is an example of statistical area level 4 map for Adelaide.

Statistical Area Level 4 map - Western Australia



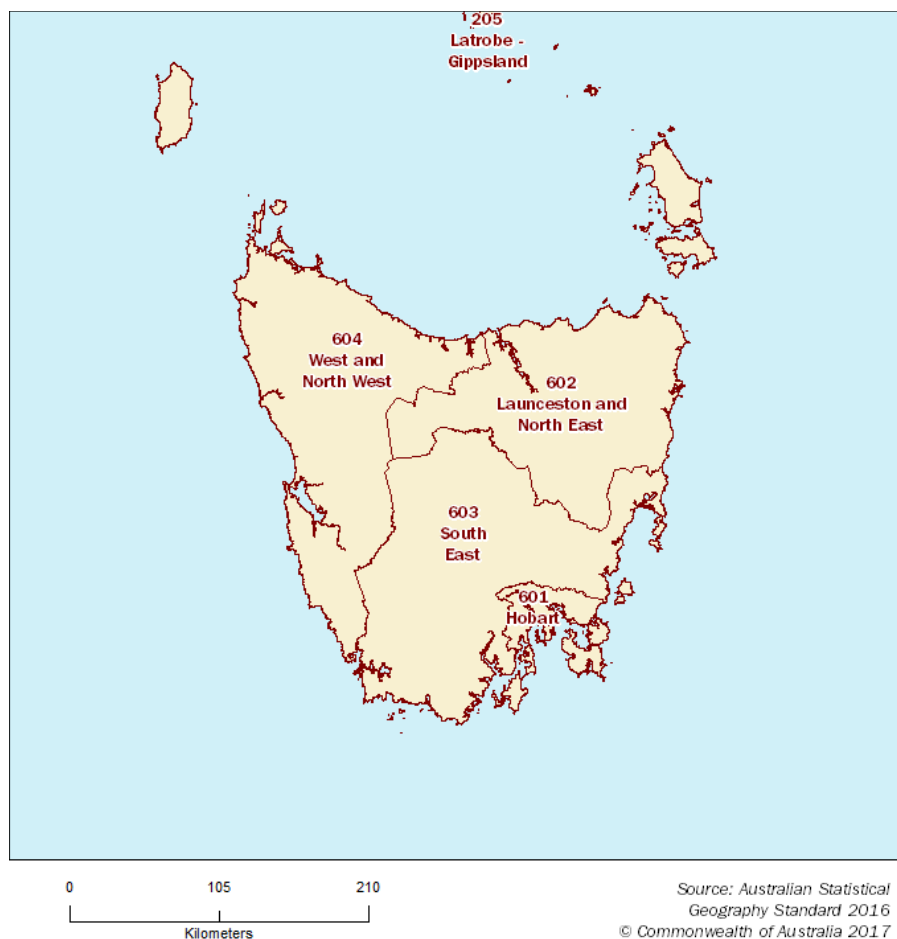
Statistical Area Level 4 (SA4s) are specifically designed for the output of Labour Force Survey. These reflect labour markets within each State and Territory, within populations limits imposed by the Labour Force Survey sample. Whole SA4s aggregate to Greater Capital City Statistical Areas (GCCSA) and State and Territory. This is an example of statistical area level 4 map for Western Australia.

Statistical Area Level 4 map - Perth



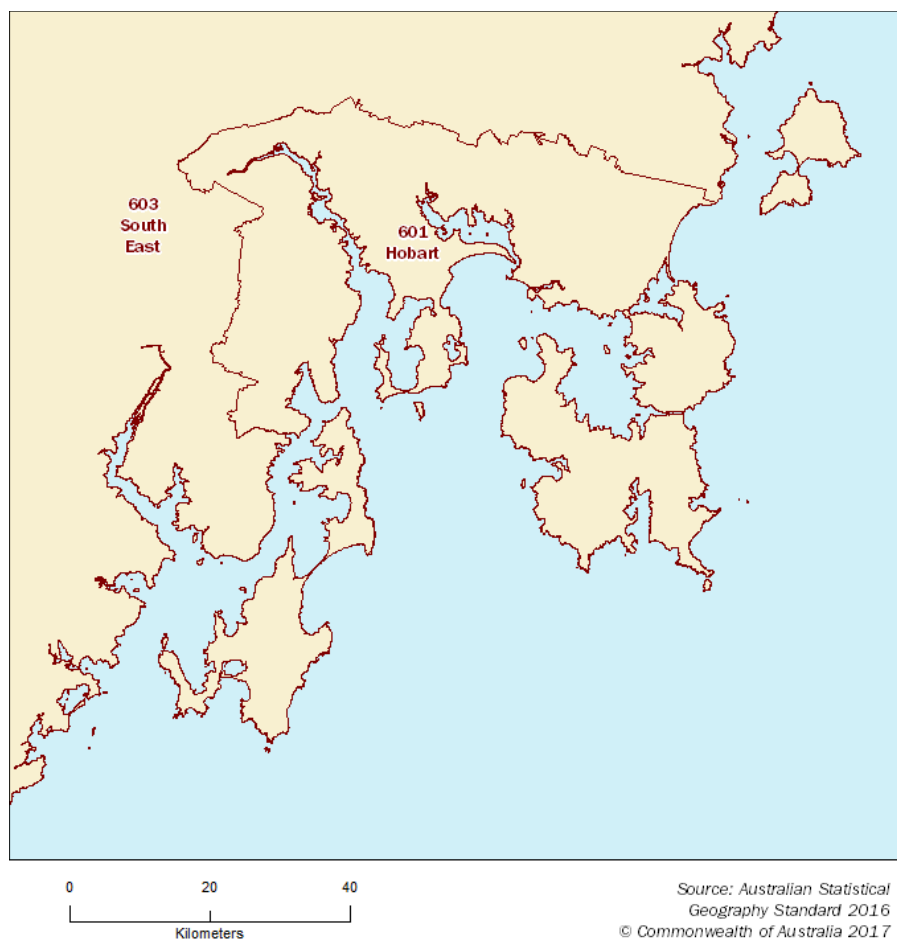
Statistical Area Level 4 (SA4s) are specifically designed for the output of Labour Force Survey. These reflect labour markets within each State and Territory, within populations limits imposed by the Labour Force Survey sample. Whole SA4s aggregate to Greater Capital City Statistical Areas (GCCSA) and State and Territory. This is an example of statistical area level 4 map for Perth.

Statistical Area Level 4 map - Tasmania



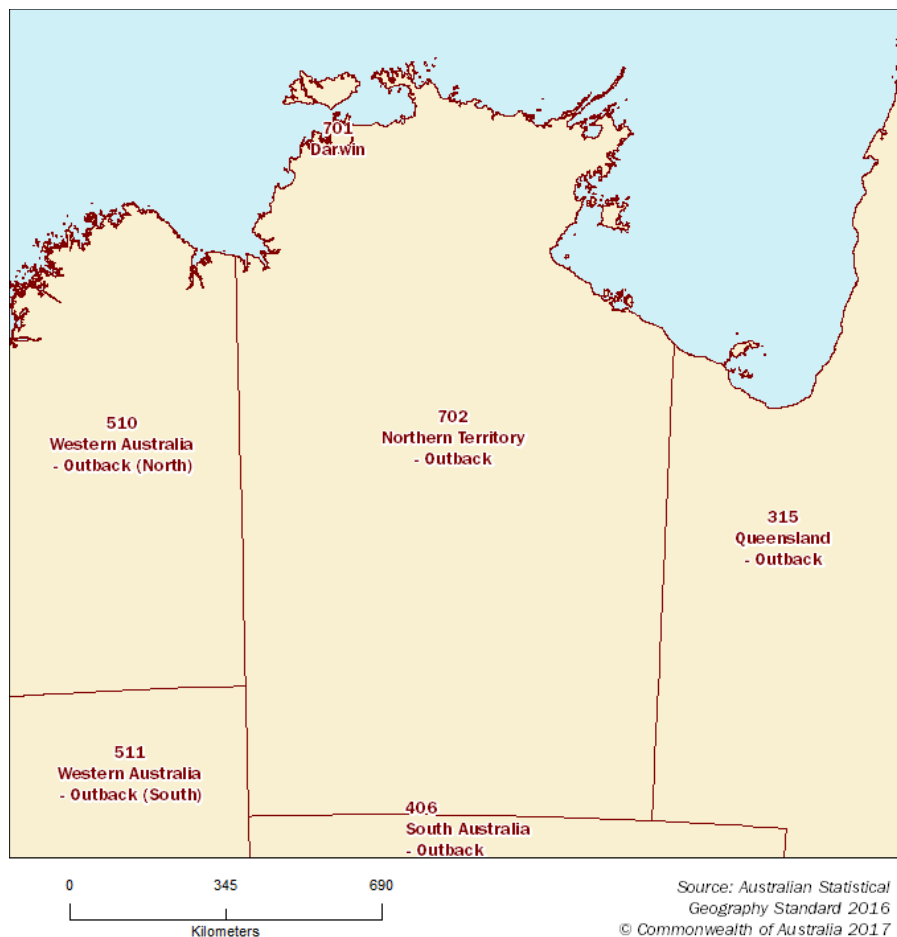
Statistical Area Level 4 (SA4s) are specifically designed for the output of Labour Force Survey. These reflect labour markets within each State and Territory, within populations limits imposed by the Labour Force Survey sample. Whole SA4s aggregate to Greater Capital City Statistical Areas (GCCSA) and State and Territory. This is an example of statistical area level 4 map for Tasmania.

Statistical Area Level 4 map - Hobart



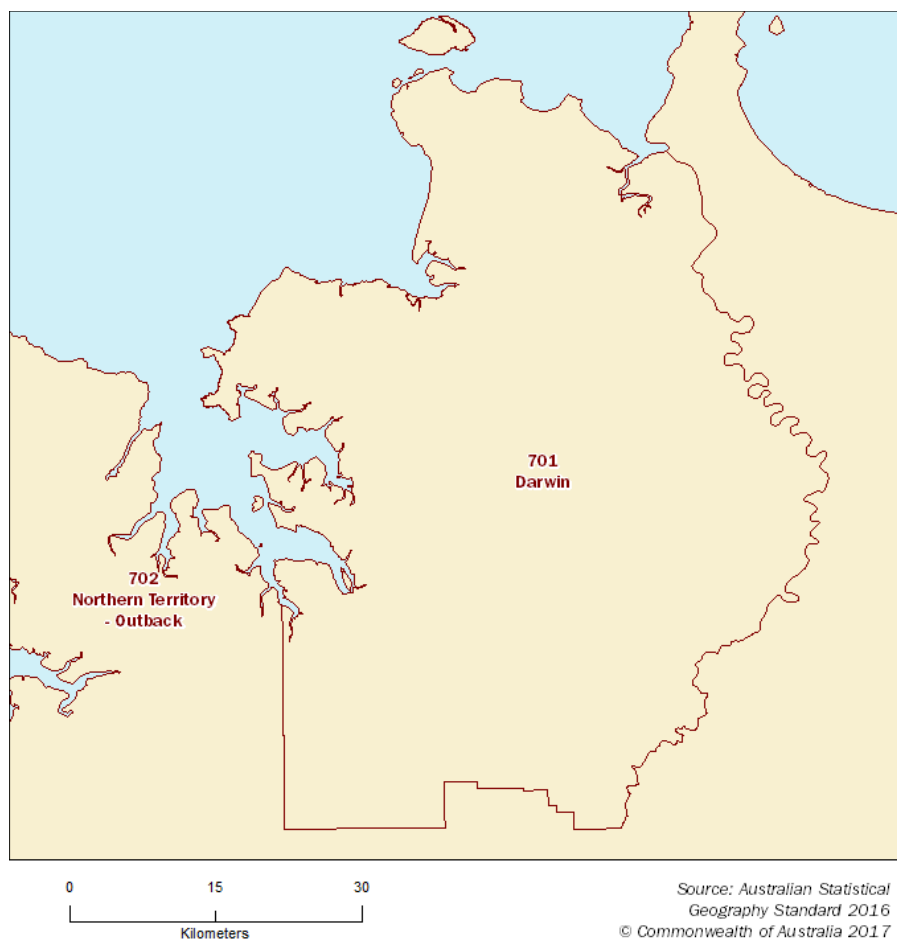
Statistical Area Level 4 (SA4s) are specifically designed for the output of Labour Force Survey. These reflect labour markets within each State and Territory, within populations limits imposed by the Labour Force Survey sample. Whole SA4s aggregate to Greater Capital City Statistical Areas (GCCSA) and State and Territory. This is an example of statistical area level 4 map for Hobart.

Statistical Area Level 4 map - Northern Territory



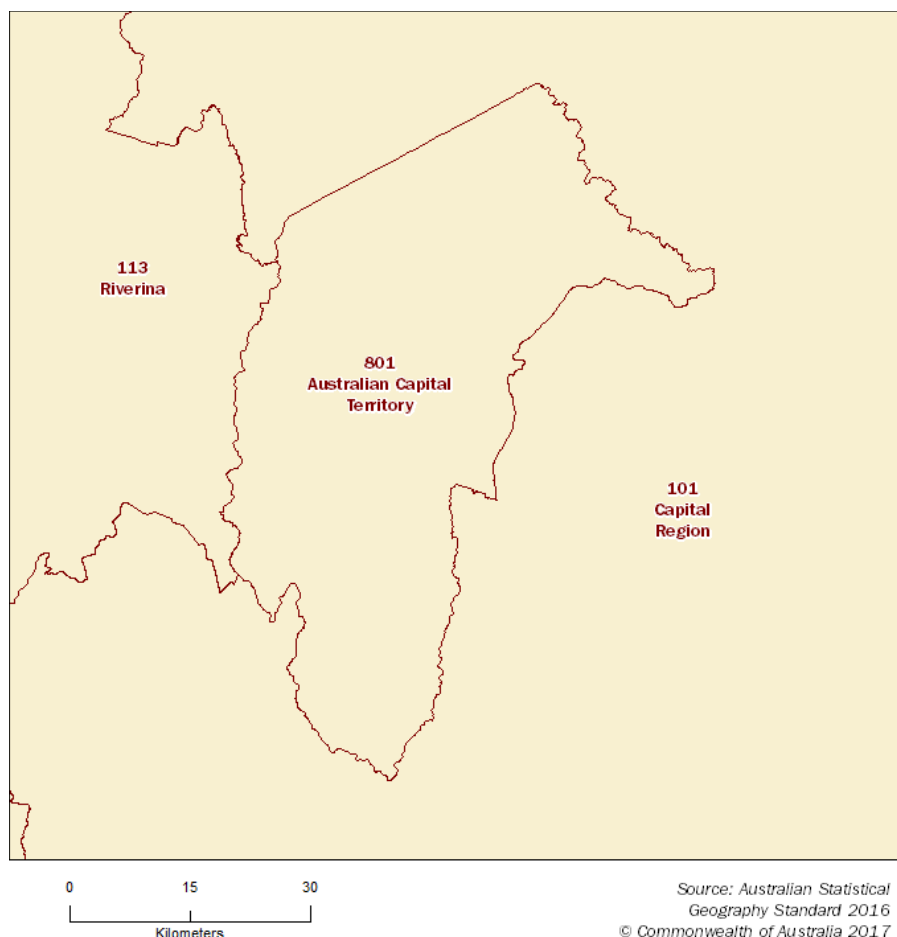
Statistical Area Level 4 (SA4s) are specifically designed for the output of Labour Force Survey. These reflect labour markets within each State and Territory, within populations limits imposed by the Labour Force Survey sample. Whole SA4s aggregate to Greater Capital City Statistical Areas (GCCSA) and State and Territory. This is an example of statistical area level 4 map for the Northern Territory.

Statistical Area Level 4 map - Darwin



Statistical Area Level 4 (SA4s) are specifically designed for the output of Labour Force Survey. These reflect labour markets within each State and Territory, within populations limits imposed by the Labour Force Survey sample. Whole SA4s aggregate to Greater Capital City Statistical Areas (GCCSA) and State and Territory. This is an example of statistical area level 4 map for Darwin.

Statistical Area Level 4 map - Australian Capital Territory



Statistical Area Level 4 (SA4s) are specifically designed for the output of Labour Force Survey. These reflect labour markets within each State and Territory, within populations limits imposed by the Labour Force Survey sample. Whole SA4s aggregate to Greater Capital City Statistical Areas (GCCSA) and State and Territory. This is an example of statistical area level 4 map for the Australian Capital Territory.

Countries

The Standard Australian Classification of Countries (SACC) is a classification of countries essentially based on the concept of geographic proximity. In its structure, it groups neighbouring countries into progressively broader geographic areas on the basis of their similarity in terms of social, cultural, economic and political characteristics.

The base level units in the classification are 'countries', which is defined to include:

- fully independent countries (sovereign nation states);
- administrative subdivisions of the United Kingdom (England, Scotland, Wales and Northern Ireland);
- external territories and dependencies of independent countries, for example, Falkland Islands, Martinique;
- units which are recognised geographic areas, the ownership or control of which is in dispute, e.g. West Bank/Gaza Strip; and
- residual categories ('not elsewhere classified' (n.e.c.) categories) consisting of geographic areas which are not separately identified in the classification, and which are not part of one of the separately identified base level units, e.g. Polynesia (excludes Hawaii), n.e.c. contains a number of minor islands which are not part of any of the separately identified country units of the Minor Group Polynesia (excludes Hawaii).

The classification includes all countries currently existing in the world, as defined above.

The SACC is a three-level hierarchical classification ranging from broad major groups to the base unit of discrete countries, as defined above. The three levels consist of:

- 255 discrete countries, as described above;
- 27 minor groups, which are groups of neighbouring countries; and
- 9 major groups.

Each of the 9 major groups are formed by aggregating geographically proximate minor groups, which in turn are groups of neighbouring countries similar in terms of social, cultural, economic and political characteristics. Each major group lies wholly within the bounds of a single geographic continent (with two exceptions: North Africa and the Middle East, and Americas). The nine major groups are:

- Oceania and Antarctica
- North-West Europe
- Southern and Eastern Europe

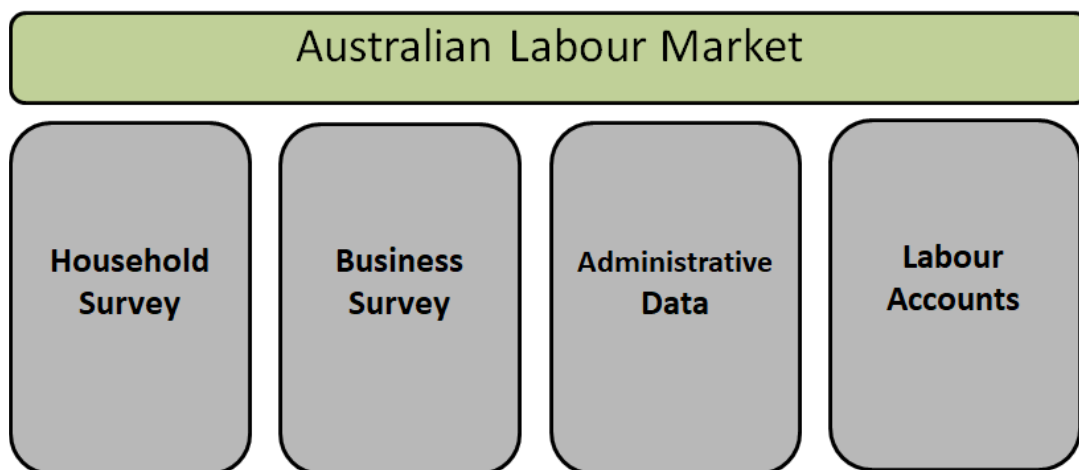
- North Africa and the Middle East
- South-East Asia
- North-East Asia
- Southern and Central Asia
- Americas
- Sub-Saharan Africa

For further information see [Standard Australian Classification of Countries \(SACC\) \(/statistics/classifications/standard-australian-classification-countries-sacc/latest-release\)](https://www.abs.gov.au/statistics/classifications/standard-australian-classification-countries-sacc/latest-release).

Methods: Four pillars of labour statistics

ABS labour statistics are drawn from four key types of data sources, or “pillars” of data, which provide complementary insights into the labour market. These are:

- household surveys - individual households answer labour market questions about their individual, family or household circumstances (e.g. the monthly Labour Force Survey)
- business surveys - collect a broad range of information from businesses about jobs and employees (e.g. the Survey of Employee Earnings and Hours, Job Vacancies Survey)
- administrative data - information maintained by governments (such as taxation data) and other entities made available to the ABS for statistical purposes (e.g. as published in Weekly Payroll Jobs and Wages)
- accounts compilation - bringing together data from separate administrative, business, and household sources to produce an Australian Labour Account)



Shows the four pillars that underpin Australian labour market statistics: Household Surveys, Business Surveys, Administrative Data and Labour Accounts

Sample surveys versus censuses

The ABS uses both sample surveys and censuses to collect information from a population about characteristics of interest. In the field of labour statistics, the ABS uses sample surveys of households and businesses, as well as censuses (such as the Industrial Disputes collection).

Censuses involve the collection of information from all units in the target population, while sample surveys involve the collection of information from only a part (sample) of the target population.

Sample surveys have both advantages and disadvantages when compared with censuses. Some advantages are reduced costs (as less time is needed to collect, process and produce data), possible reductions in non-sampling error (this concept is discussed in further detail later in this chapter), improved timeliness, and the potential to gather more detailed information from each respondent.

A disadvantage of sample surveys is that estimates are subject to sampling error, which occurs because data were obtained from only a sample rather than the entire population (this concept is discussed in further detail later in this chapter). Also, as a result of obtaining only a small number of observations in particular geographical areas and sub-populations, detailed cross-tabulations may be subject to high levels of error and be of limited use.

Censuses are generally used when broad level information is sought for many fine sub-groups of the population, whereas sample surveys are used to collect detailed information to estimate for broader levels of the population.

Sample design and sampling techniques

ABS labour-related household and business sample surveys use probability sampling techniques, drawing their samples from a population frame. This section briefly defines and explains key concepts and terms related to survey design. See the household and business surveys sections for more detail on aspects of survey design that are particular to these types of surveys.

Population

A survey is concerned with two types of population: the target population, and the survey population. The target population is the group of units about which information is sought, and is also known as the scope of the survey. It is the population at which the survey is aimed. The scope should state clearly the units from which data are required and the extent and time covered, e.g. households (units) in Australia (extent) in August 2020 (time).

However, the target population is a theoretical population, as there are usually a number of units in the target population which cannot be surveyed. These include units which are difficult to contact and units which are missing from the frame. The survey population is that part of the population that is able to be surveyed, and is also called the coverage population.

Statistical units

Statistical units are used in the design, collection, analysis and dissemination of statistical data. There are several types of units, including: sampling units (the units selected in the sample survey), collection units (the units from which data are collected), reporting units (the units about which data are collected), and analysis units (the units used for analysis of the data). The units used in a survey may change at various stages in the survey cycle. For example, the Labour Force Survey uses a sample of households (sampling unit) from which information is collected from any responsible adult (collection unit) about each person in the household in scope of the survey (reporting units). The results of the survey may then be analysed for families (analysis unit).

Frames

The frame comprises a list of statistical units (e.g. persons, households or businesses) in the population, together with auxiliary information about each unit. It serves as a basis for selecting the sample. Two types of frames are used in ABS labour-related surveys:

- List based frames - List based frames comprise a list of all sampling units in the survey population. List based frames are commonly used in surveys of businesses. ABS business surveys currently draw their list frames from the ABS Business Register.
- Area based frames - Area based frames comprise a list of non-overlapping geographic areas. These areas may be defined by geographical features such as rivers and streets. They are usually used in household surveys. Once an area is selected, a list is made of the households in the area, and a sample of households selected from the list. Examples of geographic areas that may be used to create area frames include: local government areas; census collection districts; and postcodes.

Auxiliary variables are characteristics of each unit for which information is known on the frame prior to the survey. Auxiliary variables can be used in the sample design to better target the population of interest, if the information on the frame is of sufficiently high quality and is correlated with the variables of interest in the survey. They can also be used in the estimation process in conjunction with the survey data: for example, industry of businesses.

For most sampling methodologies, it is desirable to have a complete list from which to select a sample. However, in practice it can be difficult to compile such a complete list and therefore frame bias may be introduced. Frame bias occurs when an inappropriate frame is used or there are problems with the composition of the frame, with the result that the frame is not representative of the target population. Frames become inaccurate for many reasons. One of the most common problems is that populations change continuously, causing frames to become out of date. Frames may also be inaccurate if they are compiled from inaccurate sources. The following are some of the problems that can occur in the composition of frames.

Under coverage occurs when some units in the target population that should appear on the frame do not. These units may have different characteristics from those units which appear on the frame, and therefore results from the survey will not be representative of the target population.

Out of scope units are units that appear on the frame but are not elements of the target population. Selection of a number of out of scope units in the sample reduces the effective sample size, and increases sampling error. Furthermore, out of scope units appearing on the frame may be incorrectly accounted for in the estimation process, which may lead to bias in survey estimates.

Duplicates are units that appear more than once on the frame. The occurrence of duplicates means that the probability of selection of the units on the frame is not as it should be for the respective sample design. In particular, the duplicate units will have more than the correct chance of selection, introducing bias towards the characteristics of these units. Duplicates also increase sampling error.

Deaths are units that no longer exist in the population but are still on the frame. Deaths have the same impact on survey results as out of scope units.

The quality of auxiliary variables can affect the survey estimates of the variables of interest, through both the survey design and the estimation process.

The ABS attempts to minimise frame problems and uses standardised sample and frame maintenance procedures across collections. Some of the approaches taken are to adjust estimates using new business provisions, and to standardise across surveys the systems for handling estimation, imputation and outliers.

Probability samples

Probability samples are samples drawn from populations such that every unit in the population has a known, or calculable, non-zero probability of selection which can be obtained prior to selection. In order to calculate the probability of selection, a population frame must be available. The sample is then drawn from this frame. Alternatives to probability samples are samples formed without a frame, such as phone-in polls.

Probability sampling is the preferred ABS method of conducting major surveys, especially when a population frame is available. Probability samples allow estimates of the accuracy of the survey estimates to be calculated. They are also used in ABS surveys as a means of avoiding bias in survey results. Bias is avoided when either the probability of selection is equal for all units in the target population or, where this is not the case, the effect of non-equal probabilities is allowed for in estimation.

Stratified sampling

Stratified sampling is a technique which uses auxiliary information available for every unit on the frame to increase the efficiency of a sample design. Stratified sampling involves the division (stratification) of the population frame into non-overlapping, homogeneous (similar) groups called strata, which can be treated as totally separate populations. A sample is then selected independently from each of these groups, and can therefore be selected in different ways for different strata, e.g. some strata may be sampled using 'simple random sampling' while others may be 'completely enumerated'. These terms are explained below. Stratification variables may be geographical (e.g. State, capital city/balance of State) or non-geographical (e.g. number of employees, industry, turnover).

All surveys conducted by the ABS use stratification. Household surveys use mainly geographic strata. Business surveys typically use strata which are related to the economic activity undertaken by the business, for example industry and size of the business (the latter based on employment size).

Completely enumerated strata

Completely enumerated strata are strata in which information is obtained from all units. Strata that are completely enumerated tend to be those where: each population unit within the stratum is likely to contribute significantly to the estimate being produced (such as strata containing large employers where the estimate being produced is employment); or there is significant variability across the population units within the stratum.

Simple random sampling

Simple random sampling is a probability sampling scheme in which each possible sample of the required size has the same chance of selection. It follows that each unit of the population has an equal chance of selection.

Simple random sampling can involve units being selected either with or without replacement. Replacement sampling allows the units to be selected multiple times, whereas without replacement sampling allows a unit to be selected only once. In general, simple random sampling without replacement produces more accurate results as it does not allow sample to be 'wasted' on duplicate selections. All ABS surveys that use simple random sampling use the 'without replacement' variant. Simple random sampling without replacement is used in most ABS business surveys.

Systematic sampling

Systematic sampling is used in most ABS household surveys, and provides a simple method of selecting the sample. It involves choosing a random starting point within the frame and then applying a fixed interval (referred to as the 'skip') to select members from a frame.

Information on auxiliary variables can be used in systematic sampling to improve the efficiency of the sample. The units in the frame can be ordered with respect to auxiliary variables prior to calculating the skip interval and starting point. This approach ensures that the sample is spread throughout the range of units on the frame, ensuring a more representative sample with respect to the auxiliary variable.

Systematic sampling with ordering by auxiliary variables is only useful if the frame contains auxiliary variables about each of the units in the population, and if these variables are related to the variables of interest. The relationship between the variables of interest and the auxiliary variables is often not uniform across strata. Consequently, it is possible to design a sample survey with only some of the strata making use of auxiliary variables.

Probability proportional to size sampling

Probability proportional to size sampling is a selection scheme in which units in the population do not all have the same chance of selection. With this method, the larger the unit with respect to some measure of size, the greater the probability that unit will be selected in the sample. Probability proportional to size sampling will lead to unbiased estimates, provided the different probabilities of selection are accounted for in estimation.

Cluster sampling

Cluster sampling involves the units in the population being grouped into convenient clusters, usually occurring naturally. These clusters

are non-overlapping, well-defined groups which usually represent geographical areas. The sample is selected by selecting a number of clusters, rather than directly selecting units. All units in a selected cluster are included in the sample.

Multi-stage sampling

Multi-stage sampling is an extension of cluster sampling. It involves selecting a sample of clusters (first-stage sample), and then selecting a sample of population units within each selected cluster (second-stage sample). The sampling unit changes at each stage of selection. Any number of stages can be employed. The sampling units for any given stage of selection each form clusters of the next-stage sampling units. Units selected in the final stage of sampling are called final-stage units (or ultimate sampling units). The Survey of Employee Earnings and Hours uses multi-stage sampling - businesses (the first-stage units) selected in the survey are asked to select a sample of 'employees' (the final-stage units) using employee payrolls. Household surveys also use multi-stage sampling.

Multi-phase sampling

Multi-phase sampling involves collecting basic information from a sample of population units, then taking a sub-sample of these units (the second-phase sample) to collect more detailed information. The second-phase sample is selected using the information collected in the first phase, and allows the second-phase sample to be targeted to the specific population of interest. Population totals for auxiliary variables, and values from the first-phase sample, are used to weight the second-phase sample for the estimation of population totals.

Multi-phase sampling aims to reduce sample size and the respondent burden and collection costs, while ensuring that a representative sample is still selected from the population of interest. It is often used when the population of interest is small and difficult to isolate in advance, or when detailed information is required. Multi-phase sampling is also useful when auxiliary information is not known for all of the frame units, as it enables the collection of data for auxiliary variables in the first-phase sample.

The first-phase sample is designed to be large to ensure sufficient coverage of the population of interest, but only basic information is collected. The basic information is then used to identify those first-phase sample units which are part of the population of interest. A sample of these units is then selected for the second-phase sample. Therefore, the sampling unit remains the same for each phase of selection. If multi-phase sampling was not used, detailed information would need to be collected from all first-phase sample units to ensure reasonable survey estimates. In this way, multi-phase sampling reduces the overall respondent burden.

Weighting and estimation

Sample survey data only relate to the units in the sample. Therefore, the sample estimates need to be inflated to represent the whole population of interest. Estimation is the means by which this inflation occurs.

The following section outlines various methods of calculating the population estimates from the sample survey data. It then describes various editing procedures used in labour-related statistics to improve the population estimates.

Estimation is essentially the application of weights to the individual survey, and summing these weighted records to estimate totals. The value of these weights is determined with respect to one or more of the following three factors:

- the probability of selection for each survey unit (probability weighting);
- adjustment for non-response to correct for imbalances in the characteristics of responding sample units (post-stratification); and
- adjustments to agree with known population totals for auxiliary variables - to correct for further imbalances in the characteristics of the selected sampled units (post-stratification, ratio estimation, calibration).

Weights are determined using formulae (estimators) of varying complexity.

Number-raised estimation

Number-raised weights are given by N_h/n_h (where N_h is the total number of units in the population for the stratum, and n_h is the number of responding units in the sample for that stratum). The weight assigned to each survey unit indicates the number of units in the target population that the survey unit is meant to represent. For example, a survey unit with a weight of 100 represents 100 units in the population. Each survey unit in a stratum is given the same weight. Number-raised weights can only be used to weight simple random samples.

Advantages of number-raised estimation are: it does not require auxiliary data; it is unbiased; and the accuracy of the estimates can be calculated relatively simply. However, number-raised estimation is not as accurate as some other methods with the same overall sample size.

Ratio estimation

Ratio estimation involves the use of known population totals for auxiliary variables to improve the weighting from sample values to population estimates. It operates by comparing the survey sample estimate for an auxiliary variable with the known population total for the same variable on the frame. The ratio of the sample estimate of the auxiliary variable to its population total on the frame is used to adjust the sample estimate for the variable of interest.

The ratio weights are given by X/x (where X is the known population total for the auxiliary variable, and x is the corresponding estimate of the total based on all responding units in the sample). These weights assume that the population total for the variable of interest will be estimated by the sample equally as well (or poorly) as the population total for the auxiliary variable is estimated by the sample.

Ratio estimation can be more accurate than number-raised estimation if the auxiliary variable is highly correlated with the variable of interest. However, it is subject to bias, with the bias increasing for smaller sample sizes and where there is lower correlation between the auxiliary variable and the variable of interest.

Post-stratification

Post-stratification estimation also involves the use of auxiliary information to improve the weighting from sample values to population estimates. Subgroups of the survey sample units are formed based on auxiliary variables after the survey data have been collected. Estimates of subgroup population sizes (based on probability weighting) are compared with known subgroup population sizes from independent sources. The ratio of the two population sizes for each subgroup is used to adjust the original estimate for the variable of interest (based on probability sampling).

Post-stratification is used to refine the estimation weighting process by correcting for sample imbalance and, assuming that the survey respondents are representative of missing units, correcting for non-response. For example, in the LFS, the sample is post-stratified by age, sex, capital city/rest of State, and State/Territory of usual residence. Estimates of the number of persons in these subgroups based on Census/Estimated Resident Population data are then compared to the estimates based on the survey sample to give the post-stratification weights.

Calibration

Calibration essentially uses all available auxiliary information to iteratively modify the original weights (based on number-raised weights). The new weights ensure that the sample estimates are consistent with known auxiliary information. Both post-stratification and ratio estimation can be used as part of the calibration weighting process. Calibration is useful if the survey sample estimates need to match the unit totals for a number of different subgroups, or for more than one auxiliary variable. It is mostly used in Special Social Surveys. For example, the Survey of Employment and Unemployment Patterns was weighted so that the survey estimates aligned with both population estimates based on Census data and estimates of the number of persons 'employed', 'unemployed' and 'not in the labour force' from the LFS.

Editing

Editing is the process of correcting data suspected of being wrong, in order to allow the production of reliable statistics. The aims of editing are:

- to ensure that outputs from the collection are mutually consistent: for example, two different methods of deriving the same value should give the same answer;
- to correct for any missing data;
- to detect major errors, which could have a significant effect on the outputs; and
- to find any unusual output values and their causes.

The purpose of editing is to correct non-sampling errors, such as those introduced by misunderstanding of questions or instructions, interviewer bias, miscoding, non-availability of data, incorrect transcription, non-response, and non-contact. Non-response occurs when all (total non-response) or part (partial non-response) of a questionnaire is not completed by the respondent. High levels of non-response can cause bias in the sample based estimates.

Editing is also used to identify outliers. The statistical term 'outlier' has several definitions, depending on the context in which it is used. Here it is used loosely to describe extreme values that are verified as being correct, but are very different from the values reported by similar units, and are expected to occur only very rarely in the population as a whole. In practice, an outlier is usually considered to be a unit that has a large effect on survey estimates of level, on estimates of movement, or on the sampling variance. This may occur because the unit is not similar to other units in the stratum - for example, if its 'true employment is much greater than the frame employment. It may also occur when an extreme value is recorded for some variable from an otherwise ordinary sampling unit.

Certain types of non-response, and the presence of outliers in the sample, may be addressed using a variety of statistical techniques.

Imputation involves supplying a value for a non-responding unit, or to replace 'suspect' data. Imputation methods fall into three groups:

- the imputed value may be derived from other information supplied by the respondent;
- the imputed value may be derived from information supplied by other similar respondents in the current survey; and
- the values supplied by the respondent in previous surveys may be modified to derive a value.

The following imputation methods are used in labour-related surveys:

- Deductive imputation involves correcting a missing or erroneous value by using other information that reveals the correct answer. For example, a response of 18,000 has been given where respondents have been asked to reply in '\$000s' and where the expected range of

responses is 13-21. A quick examination of other parts of the form shows that \$18,000 is very likely the amount actually spent by the respondent, so 18,000 is 'corrected' to 18.

- Central-value imputation involves replacing a missing or erroneous item with a value considered to be 'typical' of the sample or sub-sample concerned. Live respondent mean is an example of central-value imputation. This technique involves calculating the average stratum value for the data item of interest across all responding live units in the stratum, and assigning this value to all live non-responding units in the stratum.
- Hot-deck imputation is similar to central-value imputation, but takes the absolute value from a donor unit: for example, earnings per hour for a given combination of occupation, location and industry in Characteristics of Employment.
- Cold-deck imputation involves using previous survey data to amend items which fail edits. It may involve copying data from the previous survey cycle to the current cycle. One specific example of this type of imputation is Beta imputation, which involves estimating missing values by applying an imputed growth rate to the most recently reported data for these units, provided that data have been reported in either of the two previous periods.

When adjusting for outliers, a compromise is always necessary between the variability and bias associated with an estimate. There are two methods available for dealing with outliers. Historically the ABS has used the 'surprise outlier' approach for most business surveys, but over time has gradually changed to using 'winsorization'.

- Surprise outlier approach - Generally, this technique is used to deal with a selected unit which is grossly extreme for a number of variables. The approach treats each outlier as if it were the only extreme unit in the stratum population. The outlier is given a weight of one, as if it had been selected in a CE stratum. As a result of the outlier's movement to the CE stratum, the weight for units in the outlier's selection stratum has to be recalculated, as the population and sample size have effectively been reduced by one. This has the effect that the other population units which would have been represented by the outlier are now represented by the average of the other units in the stratum. Therefore, the choice of treatments for a suspected outlier using the surprise outlier approach are either for it to represent all of the units it would normally represent, or to represent no units other than itself. It is preferable to set a maximum number of surprise outliers which can be identified in any one survey.
- Winsorization technique - This technique is a more flexible approach. Here a value is considered to be an outlier if it is greater than a predetermined cut off. The effect of the outlier on the estimates is reduced by modifying its reported value. On application of the winsorization formula, sample values greater than the cut off are replaced by the cut off plus a small additional amount. The additional amount is the difference between the sample value and the cut off, multiplied by the stratum sampling fraction. Thus winsorization has most impact in strata with low sampling fractions, and the impact decreases as sampling fractions increase. Effectively, winsorization results in the outlier only representing itself, with the remaining population units that would have been represented by the outlier being instead represented by the cut off.

Time series estimates

Time series are statistical records of various activities measured at regular intervals of time, over relatively long periods. Data collected in irregular surveys do not form time series. The following section outlines the various elements of time series, and describes the ABS method of calculating seasonally adjusted and trend estimates.

ABS time series statistics are published in three forms: original, seasonally adjusted and trend.

Original estimates are the actual estimates the ABS derives from the survey data or other non-survey sources. Original estimates are comprised of trend behaviour, systematic calendar related influences, and irregular influences.

Systematic calendar related influences operate in a sustained and systematic manner that is calendar related. The two most common of these influences are seasonal influences and trading day influences.

Seasonal influences occur for a variety of reasons:

- They may simply be related to the seasons and related weather conditions, such as warmth in summer and cold in winter. Weather conditions that are out of character for a particular season, such as snow in summer, would appear as irregular, not seasonal, influences.
- They may reflect traditional behaviour associated with various social events (e.g. Christmas and the associated holiday season).
- They may reflect the effects of administrative procedures (e.g. quarterly provisional tax payments and end of financial year activity).

Trading day influences refer to activity associated with the number and types of days in a particular month, as different days of the week often have different levels of activity. For instance, a calendar month typically comprises four weeks (28 days) plus an extra two or three days. If these extra days are associated with high activity, then activity for the month overall will tend to be higher.

Seasonal and trading day factors are estimates of the effect that the main systematic calendar related influences have on ABS time series. These evolve to reflect changes in seasonal and trading patterns of activity over the life of the time series, and are used to remove the effect of seasonal and trading day influences from the original estimates.

Seasonally adjusted estimates are derived by removing the systematic calendar related influences from the original estimates. Seasonally adjusted estimates capture trend behaviour, but still contain irregular influences that can mask the underlying month to month or quarter to quarter movement in a series. Seasonally adjusted estimates by themselves are only relevant for sub-annual collections.

Irregular influences are short term fluctuations which are unpredictable, and hence are not systematic or calendar related. Examples of irregular influences are those caused by one-off effects such as major industrial disputes or abnormal weather patterns. Sampling and

non-sampling errors that behave in an irregular or erratic fashion with no noticeable systematic pattern are also irregular influences.

Trend estimates are derived by removing irregular influences from the seasonally adjusted estimates. As they do not include systematic, calendar related influences or irregular influences, trend estimates are the best measure of the underlying behaviour of the series, and the labour market.

Trend estimates are produced by smoothing the seasonally adjusted series using a statistical procedure based on Henderson moving averages. At each survey cycle, the trend estimates are calculated using a centred x-term Henderson moving average of the seasonally adjusted series. The moving averages are centred on the point in time at which the trend is being estimated. The number of terms used to calculate the trend estimates varies across surveys. Generally, ABS monthly surveys use a 13-term Henderson moving average, and quarterly surveys use a 7-term Henderson moving average.

Estimates for the most recent survey cycles cannot be directly calculated using the centred moving average method, as there are insufficient data to do so. Instead, alternative approaches that approximate the smoothing properties of the Henderson moving average are used - such as asymmetric averages. This can lead to revisions in the trend estimates for the most recent survey cycles, until sufficient data are available to calculate the trend using the centred Henderson moving average. Revisions of trend estimates will also occur with revisions to the original data and re-estimation of seasonal adjustment factors.

Reliability of estimates

The accuracy of an estimate refers to how close that estimate is to the true population value. Where there is a discrepancy between the value of the sample estimate and the true population value, the difference between the two is referred to as the 'error of the sampling estimate'. The total error of the survey estimate results from two types of error:

- sampling error - errors which occur because data were obtained from only a sample rather than the entire population, and
- non-sampling error - errors which occur at any stage of a survey, and can also occur in censuses.

Sampling error

Sampling error equals the difference between the estimate obtained from a particular sample, and the value that would be obtained if the whole survey population were enumerated. It is important to consider sampling error when publishing survey results as it gives an indication of the accuracy of the estimate, and therefore reflects the importance that can be placed on interpretations. For a given estimator and sample design, the expected size of the sampling error is affected by how similar the units in the target population are and the sample size.

Variance

Variance is a measure of sampling error that is defined as the average of the squares of the deviation of each possible estimate (based on all possible samples for the same design) from the expected value. It gives an indication of how accurate the survey estimate is likely to be, by measuring the spread of estimates around the expected value. For probability sampling, an estimate of the variance can be calculated from the data values in the particular sample that is generated.

Methods used to calculate estimates of variance in ABS labour-related surveys are outlined below.

- Jack-knife: This method starts by dividing the survey sample into a number of equally sized groups (replicate groups), containing one or more units. Pseudo-estimates of the population total are then calculated from the sample by excluding each replicate group in turn. The jack-knife variance is derived from the variation of the respective pseudo-estimates around the estimate based on the whole sample. This method is used in a number of household surveys, including the LFS (from November 2002), supplementary surveys (from August 2005), the Multipurpose Household Survey (MPHS) and some labour-related business surveys.
- Bootstrap: The Bootstrap is a variance estimation method which relies on the use of replicate samples, essentially sampling from within the main sample. Each of these replicate samples is then used to calculate a replicate estimate and the variation in these replicate estimates is used to calculate the variance of a particular estimate.
- Ultimate cluster variance: This method is used in some multi-stage sampling, and involves using the variation in estimates derived from the first-stage units to estimate the variance of the total estimate. This method is used in the Survey of Employee Earnings and Hours.
- Split halves: This method involves dividing the sample into half and, from each half, obtaining an independent estimate of the total. The variance estimate is produced using the square of the difference of these estimates. Variations of the split halves method for calculating variance estimates were used in a number of household surveys, including the LFS prior to November 2002 and supplementary surveys prior to August 2005.

The variances indicated in ABS household survey publications are generally based on models of each survey's variance. The variances for a range of estimates are calculated using one of the above methods, and a curve is fitted to the results. This curve indicates the level of variance which could be expected for a particular size of estimate.

Standard Error (SE)

The most commonly used measure of sampling error is called the standard error (SE). The SE is equal to the square root of the variance. An estimate of the SE can be derived from either the population variance (if known) or the estimated variance from the sample units. Any

estimate derived from a probability based sample survey has an SE associated with it (called the SE of the estimate). The main features of SEs are set out below.

- SEs indicate how close survey estimates are likely to be to the expected population values that would be obtained from a census conducted under the same procedures and processes;
- SEs provide measures of variation in estimates obtained from all possible samples under a given design;
- Small SEs indicate that variation in estimates from repeated samples is small, and it is likely that sample estimates will be close to the true population values, regardless of the sample selected;
- Estimates of SEs can be obtained from any probability sample - different random samples will produce different estimates of SEs;
- SEs calculated from survey samples are themselves estimates, and thus also subject to SEs;
- When comparing survey estimates, statements should be made about the SEs of those estimates; and
- SEs can be used to work out confidence intervals. This concept is explained below.

Confidence Interval (CI)

A confidence interval (CI) is defined as an interval, centred on the estimate, with a prescribed level of probability that it includes the true population value (if the estimator is unbiased), or the mean of the sampling distribution (if the estimator is biased). Estimates from ABS surveys are usually unbiased.

Estimates are often presented in terms of a CI. Most commonly, CIs are constructed for 66%, 95%, and 99% levels of probability. The true value is said to have a given probability of lying within the constructed interval. For example:

- 66% chance that the true value lies within 1 standard error of the estimate (2 chances in 3);
- 95% chance that the true value lies within 2 standard errors of the estimate (19 chances in 20); and
- 99% chance that the true value lies within 3 standard errors of the estimate (99 chances in 100).

CIs are constructed using the standard error associated with an estimate. For example, a 95% CI is equivalent to the survey estimate, plus or minus two times the standard error of the estimate. For example, the originally published LFS estimate of employment (seasonally adjusted) for September 2017 was 12,290,200 persons, and the estimate had a standard error of 44,400. The 95% CI could be expressed: "we are 95% confident that the true value for employment lies between 12,201,400 and 12,379,000".

Relative Standard Error (RSE)

Another measure of sampling error is the relative standard error (RSE). This is the standard error expressed as a percentage of the estimate. Since the standard error of an estimate is generally related to the size of the estimate, it is not possible to deduce the accuracy of the estimate from the standard error without also referring to the size of the estimate. The relative standard error avoids the need to refer to the estimate, since the standard error is expressed as a proportion of the estimate. RSEs are useful when comparing the variability of population estimates of different sizes. They are commonly expressed as percentages.

Very small estimates are subject to high RSEs, which detract from their usefulness. In some ABS labour-related statistical publications, estimates with an RSE greater than 25% but less than 50% have an asterisk (*) displayed beside the estimate, indicating they should be used with caution. Estimates with an RSE greater than 50% have two asterisks (**) displayed beside the estimate, indicating they are so unreliable as to detract seriously from their value for most reasonable uses. All cells in a Data Cube with RSEs greater than 25% contain a comment indicating the size of the RSE. These cells are identified by a red indicator in the corner of the cell. The comment appears when the mouse pointer hovers over the cell.

Non-sampling error

Non-sampling error refers to all other errors in the estimate. Non-sampling error can be caused by non-response, badly designed questionnaires, respondent bias, interviewer bias, collection bias, frame deficiencies and processing errors. It is often difficult and expensive to quantify non-sampling error.

Non-sampling errors can occur at any stage of the process, and in both censuses and sample surveys. Non-sampling errors can be grouped into two main types: systematic and variable. Systematic error (called bias) makes survey results unrepresentative of the population value by systematically distorting the survey estimates. Variable error can distort the results on any given occasion, but tends to balance out on average over time.

Every effort is made to minimise non-sampling error in ABS surveys at every stage of the survey, through careful design of collections, and the use of rigorous editing and quality control procedures in the compilation of data. Some of the approaches adopted are listed below.

- Reducing frame deficiencies.
- Reducing non-response - Non-response results in bias in the estimate because it is possible the non-respondents have different characteristics to respondents, leading to an under-representation of the characteristics of non-respondents in the sample survey estimate. The ABS pursues a policy of intensive follow up of non-respondents. This includes multiple visits or telephone calls in an attempt to contact respondents, and letters requesting compliance with the survey. Partial non-response is also followed up with respondents.
- Reducing instrument errors - These errors relate to poor questionnaire design, leading to questions which are not easily understood by respondents, and hence incorrect responses. This is particularly relevant for household surveys. The ABS ensures that all household

survey questionnaires are carefully tested using cognitive testing and dress rehearsals of the survey before it is officially conducted. New business survey questionnaires and additional questions in business surveys are also rigorously tested before they are introduced.

Measures of non-sampling error

Non-sampling error is difficult to quantify; however, an indication of the level of non-sampling error can be determined from a number of quality measures. These include:

- Response rates: The number of responding units in a survey expressed as a proportion of the total number of units selected (excluding deaths). Response rates can also be calculated for individual questions within a survey.
- Imputation rates: The number of responses which need to be imputed expressed as a proportion of the total number of responses
- Coverage rates: An estimate of the proportion of units in the target population which are not covered by the frame
- Any Responsible Adult rates: The number of responding units in a survey for which information was supplied by a responsible adult rather than personally, expressed as a proportion of the total number of responding units. Any Responsible Adult rates can only be calculated for household surveys.

Confidentiality

All releases of data from the ABS are confidentialised to ensure that no unit (e.g. person or business) is able to be identified. The ABS applies a set of rules, concerning the minimum number of responses required to contribute to each data cell of a table, and the maximum proportion that any one respondent can contribute to a table cell, to ensure that information about specific units cannot be derived from published survey results.

In some instances it is not possible to confidentialise responses from businesses that contribute substantially to a data cell. In this case, agreement is sought from the business for their data to still be published. If agreement is not reached, all affected data cells are suppressed.

Under the Census and Statistics Act, 1905 it is an offence to release any information collected under the Act that is likely to enable identification of any particular individual or organisation. Introduced random error is used to ensure that no data are released which could risk the identification of individuals in the statistics.

A technique, known as perturbation, has been developed to randomly adjust cell values. Random adjustment of the data is considered to be the most satisfactory technique for avoiding the release of identifiable data. When the technique is applied, all cells are slightly adjusted to prevent any identifiable data being exposed. These adjustments result in small introduced random errors. However, the information value of the table as a whole is not impaired.

These adjustments may cause the sum of rows or columns to differ by small amounts from table totals. The counts are adjusted independently in a controlled manner, so the same information is adjusted by the same amount. However, tables at higher geographic levels may not be equal to the sum of the tables for the component geographic units.

It is not possible to determine which individual figures have been affected by random error adjustments, but the small variance which may be associated with derived totals can, for the most part, be ignored.

Household surveys

Household surveys and population censuses constitute the primary sources of ABS labour statistics on people and households. In addition to information about current and previous labour force participation, information collected also includes demographic data, such as age, sex, family characteristics and country of birth. Labour statistics collected about people provide insight into the supply of labour to the Australian labour market.

Household surveys falling within the labour statistics program include:

- The monthly [Labour Force Survey \(/statistics/labour/employment-and-unemployment/labour-force-australia/latest-release\)](/statistics/labour/employment-and-unemployment/labour-force-australia/latest-release) (LFS)
- [Characteristics of Employment \(/statistics/labour/earnings-and-work-hours/characteristics-employment-australia/latest-release\)](/statistics/labour/earnings-and-work-hours/characteristics-employment-australia/latest-release) - annual supplement to the LFS
- [Participation, Job Search and Mobility \(/statistics/labour/employment-and-unemployment/participation-job-search-and-mobility-australia/latest-release\)](/statistics/labour/employment-and-unemployment/participation-job-search-and-mobility-australia/latest-release) - annual supplement to the LFS
- [Barriers and Incentives to Labour Force Participation \(/statistics/labour/employment-and-unemployment/barriers-and-incentives-labour-force-participation-australia/latest-release\)](/statistics/labour/employment-and-unemployment/barriers-and-incentives-labour-force-participation-australia/latest-release) - Multipurpose Household Survey topic collected within the LFS
- [Retirement and Retirement Intentions \(/statistics/labour/employment-and-unemployment/retirement-and-retirement-intentions-australia/latest-release\)](/statistics/labour/employment-and-unemployment/retirement-and-retirement-intentions-australia/latest-release) - Multipurpose Household Survey topic collected within the LFS
- [Work Related Injuries \(/statistics/labour/earnings-and-work-hours/work-related-injuries/latest-release\)](/statistics/labour/earnings-and-work-hours/work-related-injuries/latest-release) - Multipurpose Household Survey topic collected within the LFS

The ABS household survey program also includes other social surveys that contain a labour force status module. Other labour-related data include:

- [Pregnancy and Employment Transitions \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/FF16E659A7EBD2C7CA25720F007D9193?opendocument\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/FF16E659A7EBD2C7CA25720F007D9193?opendocument)

- voluntary work from the [General Social Survey \(/statistics/people/people-and-communities/general-social-survey-summary-results-australia/latest-release\)](#)
- disability and labour force participation from [Disability, Ageing and Carers, Australia \(/statistics/health/disability/disability-ageing-and-carers-australia-summary-findings/latest-release\)](#)
- [Education and Work, Australia \(/statistics/people/education/education-and-work-australia/latest-release\)](#)
- [Qualification and Work, Australia \(/statistics/people/education/qualifications-and-work/latest-release\)](#)
- employment and health status from the [National Health Survey \(/statistics/health/health-conditions-and-risks/national-health-survey-first-results/2017-18\)](#)
- employment status of migrants from [Characteristics of Recent Migrants, Australia \(/statistics/people/people-and-communities/characteristics-recent-migrants/latest-release\)](#)

For specific information on each of these surveys, refer to the relevant methodology pages for each statistical release.

Scope and coverage

The scope of ABS household surveys varies from survey to survey. The Census of Population and Housing has the broadest scope of all ABS household collections, and aims to collect information from all persons residing in Australia on Census night. The scope of the Labour Force Survey (LFS) is the civilian population aged 15 years and over, and while the Labour Force Supplementary Surveys (LFSSs) vary, their scope is generally narrower than that of the LFS. The target populations of Special Social Surveys (SSS) also vary.

Practical collection difficulties, low levels of response, high levels of sample loss and the small numbers involved have resulted in the exclusion of persons living in remote and sparsely settled parts of Australia from a number of household surveys (exceptions include: the Census of Population and Housing; the LFS; and some SSSs). The exclusion of these persons has only a minor impact on any estimates produced for individual states and territories, with the exception of the Northern Territory.

Some household surveys exclude all persons living in special dwellings from their scope. Special dwellings include hotels, motels, hospitals, prisons and boarding houses. Other household surveys exclude certain types of persons living in special dwellings: for example, institutionalised persons and boarding school pupils are excluded from the scope of most supplementary surveys.

Institutionalised persons are people selected in institutions such as hospitals and homes (including general homes, other hospitals, convalescent homes, homes for the aged, retirement homes, homes for the handicapped and orphanages), and prisons, apart from live-in staff that do not usually live in a private dwelling.

Coverage rules are generally applied in all household surveys to ensure that each person is associated with only one dwelling, and hence has only one chance of selection. The chance of a person being enumerated at two separate dwellings in the one survey is considered to be negligible. Some surveys remove certain dwellings from coverage but not from scope; the estimates still are intended to include these excluded dwellings. The estimation method used for the survey makes an adjustment to include these dwellings and persons in the final outputs.

Collection methodologies

A number of methods are used by the ABS for collecting data. Those most commonly used in labour-related surveys can be categorised into three basic groups:

- interview;
- self-enumeration; and
- documentary sources.

Historically, these collection methods have been manual, paper-based methods. Each of these methods has a corresponding electronic method, generally referred to as 'computer assisted'.

Interview

The interview method of data collection involves an interviewer contacting data providers, asking the questions, and recording the responses. Interviews can be personal, where the data provider is interviewed personally, or involving Any Responsible Adult (ARA), where the ARA responds on behalf of other survey units. Interviews can be conducted either face to face or over the telephone. Interviews are most commonly used in household surveys.

Personal interviewing involves each provider being questioned about his or her own details. The Any Responsible Adult (ARA), or proxy, method of interviewing is used in a number of ABS household surveys as an alternative to personal interviewing. This involves obtaining information about all the persons in a selected household who are in scope of the survey, from the first responsible adult with whom the interviewer makes contact (rather than speaking to each individual personally). The method is only used for collecting information on topics where other members of the household are likely to be able to answer the question. If the ARA is unable to supply all of the details for another individual in the household, a personal interview is conducted with that particular individual.

Face to face interview (CAPI - Computer Assisted Personal Interviewing)

When performing a computer-assisted personal interview (CAPI), the interviewer takes a laptop computer to the interview and codes the

data into the computer as it is provided. Advantages of this method of data collection are:

- more flexibility to move around the form and skip questions;
- higher response rates;
- interviewers are able to help respondents understand the questions, thereby allowing for the collection of more complex data;
- some edit checks are carried out at the time of the interview, thus improving data quality; and
- the overall timeliness of the survey is improved.

However, face to face interviews are expensive. Face to face interviews involve a trained interviewer visiting the provider to conduct the survey. There are costs involved in time and travel to reach the respondents; maintenance of the computer equipment; in the recruitment, training in the use of CAPI; management of an interviewer work force; and the actual interview time increases as responses are coded and edited at the time of the interview. Other disadvantages are that data can possibly be subject to bias caused by the interviewer's appearance and attitude, and that respondents may not feel free to disclose sensitive or private information to an interviewer.

Telephone interview (CATI - Computer Assisted Telephone Interviewing)

Computer Assisted Telephone Interviewing (CATI) involves responses being keyed directly into a computer by the interviewer as the providers are asked the survey questions over the telephone. This technique allows for:

- reduced costs compared to face to face interviews, as fewer interviewers are needed and there are no travel costs involved;
- telephone interviews potentially producing more timely results;
- some editing to be carried out immediately (which improves the data quality and decreases processing time);
- 'call scheduling' to take place. Respondents can be called at convenient times or when data is available. Also, if the phone is engaged, the system will reschedule the call, and follow-ups for additional information are relatively quick and inexpensive;
- questions to be sequenced so that only relevant questions are visible to the interviewer (therefore reducing interviewer errors); and
- monitoring of interviewing staff so that consistency of performance is higher.

As with other methods of data collection, there are some drawbacks associated with this approach. There are limits on the number and complexity of questions that can be asked and, because of the ease with which the respondent can terminate the interview, non-response and partial non-response can be higher than with face to face interviews.

Telephone interviewing is used in both ABS household and business surveys, and may be used in conjunction with face to face interviews. For example, in the Labour Force Survey (LFS) the first interview is generally conducted face to face and the remaining interviews are conducted by telephone if the provider agrees.

Online self-completion (CAWI – Computer Assisted Web Interviewing)

Online self-completion of surveys was introduced in December 2012. Respondents were offered the option of self-completing the survey online, in place of a face-to-face or telephone interview. The online self-completion offer was later expanded to all private households. Interviewer collection (both face-to-face and via telephone) continues to be available for those respondents where it is inappropriate for operational, technological or personal reasons.

The use of electronic returns produces a faster response than other self-enumeration methods. Questions can also be sequenced so that only the questions relevant to the respondent are visible. The disadvantages are: increased cost for development of the forms, maintenance of the related systems and security, and help-desk staff to support the use of the form. Also, this technique requires respondents to have computer access.

Household surveys and collection methods

	Respondent modes	Respondent selection
Labour Force Survey and associated Supplementary Surveys	Predominantly interviewer administered – first month often face-to-face, with telephone interview thereafter. Online self-enumeration offered as the primary response mode.	Any responsible adult.
Multipurpose Household Survey	Predominantly interviewer administered – first month often face-to-face, with telephone interview thereafter. Online self-enumeration offered as the primary response mode.	Personal interview – self-reporting.
Special Social Survey	Interviewer administered – face to face or telephone interviewing.	Personal interview – self-reporting.
Census of Population and Housing	Self-enumeration – either pen and paper or on-line.	Any responsible adult.

Intensive follow up procedures for non-response are in place for household surveys. Interviewers make a number of attempts to contact households at different times of the day and on different days during the week. For households unable to be contacted by telephone, a face-to-face visit is attempted. If the household can still not be contacted within the survey period after repeated attempts, and the dwelling has been verified as not vacant, the household is listed as a non-contact.

Sample design

With the exception of the Census of Population and Housing, most ABS household surveys use probability sample designs, drawing their sample from the Monthly Population Survey (MPS) and the SSS samples, which are drawn from a 'Master Sample'. These household

surveys all use a multi-stage, stratified sample design. Typically three stages are used; the first stage units (FSUs) are randomly selected areas the size of Statistical Area Level 1's (SA1s) - about 200 dwellings. The Master Sample consists of these FSUs.

The Master Sample is drawn from the Population Survey Framework, which is composed of three components: the private dwelling framework, the special dwelling framework, and the Aboriginal and Torres Strait Islander Communities framework. These three frames are generally non-overlapping, and therefore enable the selection of samples that represent the Australian population. The overlap occurs as there are some special dwellings within the Aboriginal and Torres Strait Islander Communities framework.

For more information about sample design and method of estimation, see the LFS methodology page.

Private dwelling framework

In general, private dwellings are structures built specifically for living purposes, such as houses, flats, home units, and any other structures used as private places of residence. A private dwelling can also be a caravan, a houseboat, a house attached to an office, or rooms above a shop. In practice, some dwellings such as caravan parks and marinas are listed on the special dwelling list.

In most areas of Australia, private dwelling sample selection is structured around the selection of fine geographic regions defined by the aggregation of mesh blocks. Mesh blocks are the finest unit in the Australian Statistical Geography Standard (ASGS), the ABS Geography Standard which replaced the previous standard in 2012. For more information about mesh blocks, see Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas (cat. no. 1270.0.55.001).

The key geographic sampling unit in the new framework is called the Base Frame Unit. These Base Frame Units were created by combining contiguous mesh blocks in nearly all regions of Australia, and were created solely for the purpose of household survey sampling. Their intended role is to define the geographic area within which dwellings are organised into groups which are selected in a sample together. These selected dwellings within the selected Base Frame Units are termed the "cluster". The clusters vary in size from 5-15, reflecting the cost of enumeration. If an area is remote and costly to enumerate, it will have a cluster size at the upper-end of this range of cluster sizes.

Three special strata are adopted: Secure Apartment Buildings, Pre-Determined Growth, and Indigenous geography strata. There is a single special stratum of each type within a State/Territory (at most), so the sample in these strata can cut across the area unit boundaries

Each area selection unit in the master sample is assigned an "area type" class based on the geography of Australia. A variety of geographic classifications defined by different sources are combined to derive the area type classes:

- ASGS: Greater Capital City Statistical Area (GCCSA);
- ABS Geography classifications: Remoteness area (RA), Section of state (SoS), Urban centre or locality (UCL); and
- Household Survey Methodology (HSM): Self representing Area (SRA) / non-SRA (based on estimated population density).

Special dwelling framework

The special dwelling household framework is a list of 'special' dwellings, from which samples of special dwellings and their residents can be selected. Special dwellings are establishments which provide predominantly short-term accommodation for communal or group living, and often provide common eating facilities. They include hotels, motels, hostels, hospitals, religious institutions providing accommodation, educational institutions providing accommodation, prisons, boarding houses, short-stay caravan parks, and may include some Aboriginal and Torres Strait Islander communities that are not on the Aboriginal and Torres Strait Islander Community Frame. Some special dwellings are designed for a particular purpose (e.g. hospitals) and, as such, provide accommodation for specific groups of persons. Special dwellings each comprise a number of dwelling units. Currently, there are around 26,000 special dwellings on the frame.

The framework contains information about the occupancy of each special dwelling as it was on Census night.

The special dwelling framework is also stratified geographically, though at a broader level than the private dwelling framework. In many cases the demographic, social and labour force characteristics of the occupants of special dwellings are not typical of the population residing in private dwellings, and therefore it is necessary to sample special dwellings separately by placing them in separate strata within each geographic (sample design) region. This provides for more effective samples of persons within special dwellings and private dwellings, and the flexibility to select some samples which exclude all or some special dwellings, or to select samples in which special attention is paid to persons residing in particular special dwellings.

Aboriginal and Torres Strait Islander Community Frame

The Aboriginal and Torres Strait Islander Community frame is a tool used to ensure adequate sample selection for this population. It can be thought of as an extension of the private dwelling frame. A Mesh Block is classified as a discrete community mesh block if it is deemed to have an Aboriginal or Torres Strait Islander community population of 75% or more, and lies in the non-metropolitan area of Queensland, South Australia and Western Australia or Northern Territory. This frame is constructed using information from the Census of Population and Housing and other information covering the communities.

There are two sample groups included on this frame. Discrete Aboriginal and Torres Strait Islander communities (including any out-stations associated with them) are referred to as the 'community sample'. Dwellings in areas not covered by the community sample are

referred to as 'non-community sample'. Information on the Aboriginal and Torres Strait Islander Community frame, community and non-community sample is contained in the ABS publication National Aboriginal and Torres Strait Islander Social Survey: User Guide, 2014–15 (cat. no. 4720.0).

The Aboriginal and Torres Strait Islander Communities frame is stratified geographically by State/Territory, with Torres Strait Islander communities in Queensland separately stratified.

MPS and SSS master samples

From July 2018, there will be a single Master Sample covering the sample requirements for both the Monthly Population Survey (MPS) and the Special Social Surveys (SSS)'s. The 2018 Master Sample will be the first to make use of the Address Register, which is now also used to support the enumeration of the Census of Population and Housing. In addition, a new method of selection (known as Conditional Selection) will also operate from 2018 onward, which will support more flexible sampling methods. Conditional selection is a method of selecting survey samples that allows the ABS to effectively manage overlap between different surveys, to prevent any household from being selected for two or more surveys, while also allowing survey samples to be located nearby to each other in order to reduce survey costs.

The MPS sample and the SSS samples comprise Base Frame Units taken from the private dwelling framework, special dwellings, and Indigenous communities (IC) from the ICF. Most household surveys conducted by the ABS use samples drawn from the Master Sample.

The MPS consists of monthly LFS, the Multipurpose Household Survey (MPHS), and also various supplementary surveys conducted in conjunction with the LFS. Dwellings selected in the LFS sample remain in sample for eight consecutive months. The program of SSSs consists of large-scale periodic surveys covering a wide variety of topics.

Most SSSs have similar (though slightly smaller) survey scope to the MPS, so the requirements and structure of the samples are also similar. In terms of the geographic scope of MPS and SSSs, a key difference is that most SSSs exclude very remote areas. Most SSSs do not obtain sample from discrete Indigenous communities, or select persons in special dwellings.

To date, the SSS Base Frame Units do not include any Base Frame Units selected in the MPS sample, thereby preventing households selected for the MPS from also being selected for a SSS during the life of a specific sample design.

It has traditionally been the practice that the Master Sample is re-selected and redesigned every five years following the Census of Population and Housing. The move from Census-based master samples to Address Register-based designs enables more frequent updates, with the first Address Register-based sample expected to be in use for 3 years, from July 2018 to June 2021.

Sample selection

From 2018, the ABS is using an Address Register in the sample selection process for all of its household surveys.

The Address Register, which is also now used to support the enumeration of the Census of Population and Housing, is a list of all physical addresses (both residential and non-residential) in Australia. The main input to the register is the Geocoded National Address File (G-NAF), with continuing supplementation from other available address sources and from field work undertaken by ABS officers.

The ABS has developed this register as the central source of addresses used in the collection of information in response to the need for more efficient and effective household survey designs, including:

- the creation of a dwelling frame for the mail out areas of the 2016 Census; and
- the creation of quarterly frames for ABS household surveys.
- The Address Register Common Frame is a trusted and comprehensive data set of Australian address information. It contains current address text details, coordinate reference (or "geocode"), and address use information for addresses in Australia.

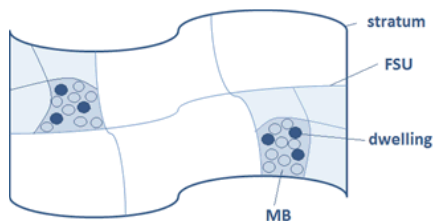
Stages of selection

There are three stages of selection:

- First Stage Units; then
- Base Frame Units (consisting of aggregates of Mesh Blocks); then
- Dwellings.

The Mesh Block is the finest ASGS 2016 geographical unit, typically containing 30-60 dwellings. First Stage Units are typically a set of contiguous Mesh Blocks. These stages of selection within a stratum are illustrated in Figure 17.1 below.

Three stages of selection



Outlines the three stages of selection in Household Surveys. In 2015 a comprehensive list of all physical addresses in Australia was created for use in household survey designs, and is known as the Address Register. It contains current address details, coordinate reference (or "geocode") and address use information for addresses in Australia. Usage of the Address Register as the Labour Force Survey sampling frame forms a three stage selection process made up of first stage units; then base frame units (consisting of aggregate of mesh blocks); and lastly dwellings.

Benchmarks

Changes to the LFS population benchmarks impact primarily on the magnitude of the LFS estimates (i.e. employment and unemployment) that are directly related to the underlying size of the population.

Estimates of the population produced from household surveys are calculated in such a way as to add up to independently estimated counts (benchmarks) of the population. For the LFS, these benchmarks are based on Census of Population and Housing data, adjusted for under-enumeration and updated for births, deaths, interstate migration, and net permanent and long term migration. Benchmarks have been developed for state/territory of usual residence, part of state of usual residence (for example, capital city, rest of state), age and sex. Each cross-classification of these benchmark variables is known as a benchmark cell. Revisions are made to benchmarks after each Census of Population and Housing, and when the bases for estimating the population are reviewed.

Other household surveys use various combinations of benchmark variables to produce benchmark cells. Some surveys use supplementary information (such as LFS estimates), referred to in this context as pseudo-benchmarks, to supplement independent demographic benchmarks based on Census of Population and Housing data. Household surveys may use calibration methods to incorporate other auxiliary information on target populations into estimates - for instance, benchmarks for the Indigenous population or the population of private households.

Non-response

Non-response arises when no information is collected from one or more occupants of a selected dwelling.

Interviewers make a number of attempts to contact households at different times of the day and on different days during the week. For households and persons unable to be contacted by telephone, face-to-face visits are attempted. If the household still cannot be contacted within the survey period after repeated attempts (and if the dwelling has been verified as not vacant), it is listed as a non-contact. Non-contact is the most common form of non-response.

The response rate commonly quoted for ABS household surveys refers to the number of fully responding dwellings expressed as a percentage of the total number of selected dwellings excluding sample loss. Examples of sample loss for the LFS include:

- households where all persons are out of scope and/or coverage;
- vacant dwellings;
- dwellings under construction;
- dwellings converted to non-dwellings;
- derelict dwellings; and
- demolished dwellings.

For most household surveys, a non-response adjustment is performed implicitly by the estimation system, which effectively imputes for each non-responding person on the basis of all responding persons in the same post-stratum. This adjustment accounts for both full non-response and non-response for individual questions.

Labour Force Survey

The Labour Force Survey (LFS) provides Australia's official measure of employment, unemployment and labour force participation. The data captured in this survey are some of Australia's key economic statistics, providing insight into the Australian economy and Australian people.

About the Labour Force Survey

The Labour Force Survey

Frequency	Monthly
Responding sample size	Approx. 26,000 households (52,000 people)
Scope	Usual resident civilians 15 years and over
Response rate	Approx. 93%
Publication	Labour Force, Australia; Labour Force, Australia - Detailed; Labour Force Status of Families, Australia
Data availability	Quarterly from 1966-1977 and monthly from 1978 onwards

Each month, The LFS collects data on the labour force activity of persons around 52,000 people in 26,000 households. The information is collected through a household sample survey conducted by trained interviewers either face-to-face or over the phone, or via online self-completion form. The survey is detailed, including around 70 questions.

The scope of the LFS is limited to the usually resident civilian population of Australia, aged 15 years and over. As such, the survey includes residents who are temporarily overseas (less than 6 weeks), but excludes members of the permanent defence forces. The ABS then weights the people in the survey sample to the most recent population figures, to provide a representative picture of the whole population.

In addition to data on employment and unemployment, the LFS also collects information on underutilisation, hours worked, job searching and retrenchments, as well as socio-demographic characteristics.

The [Labour Force Survey Standard Products and Data Item Guide \(/statistics/standards/labour-force-survey-standard-products-and-data-item-guide/jun-2016\)](#) is a useful reference for users seeking different data variables from the Labour Force Survey. The guide is divided into two sections:

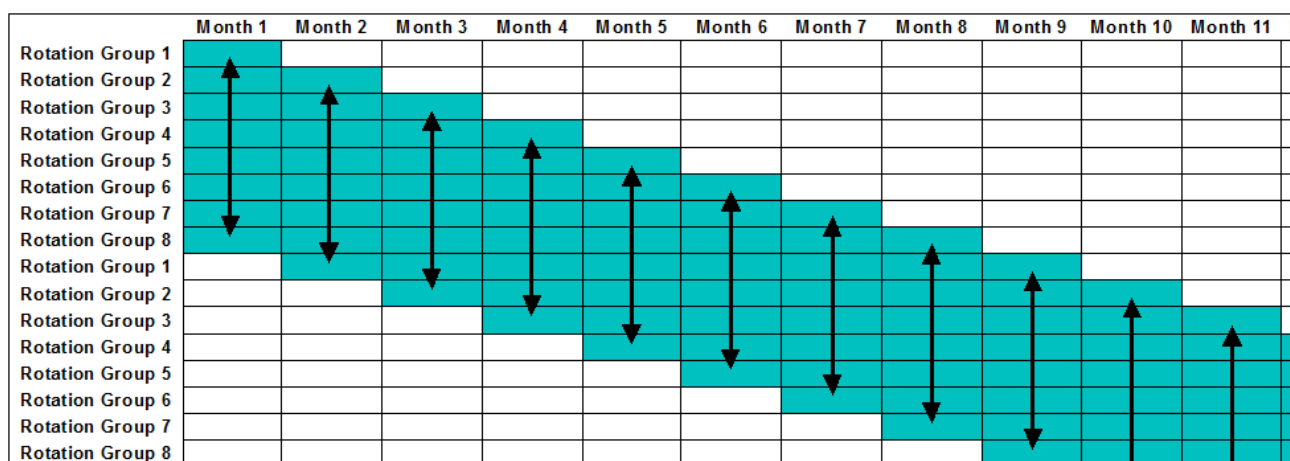
- Section 1: Labour Force Survey standard product data - The first section alphabetically lists and explains the data items in Labour Force Survey standard products and where to find them.
- Section 2: Detailed information on Labour Force Survey standard products - The second section lists the Labour Force Survey standard products, and specifies the data items contained within each spreadsheet and data cube.

Sample rotation

The LFS sample can be thought of as comprising eight sub-samples (or rotation groups), with each subsample remaining in the survey for eight months. A new rotation group is introduced each month to replace an outgoing rotation group, generally from the same geographic area.

Sample rotation enables reliable measures of monthly change in labour force statistics to be compiled, while ensuring the sample reflects changes in the household population.

Figure 1: Sample rotation



As shown in Figure 1, the LFS sample can be thought of as comprising eight sub-samples (or rotation groups), with each subsample remaining in the survey for eight months. A new rotation group is introduced each month to replace an outgoing rotation group, generally from the same geographic area. Sample rotation enables reliable measures of monthly change in labour force statistics to be compiled, while ensuring the sample reflects changes in the household population.

For more information about the Labour Force Survey, see the [Labour Force, Australia methodology page \(/methodologies/labour-force-australia-methodology/oct-2021\)](#).

Using labour force data

Time-series data

Data collected regularly over time may display seasonal and irregular patterns. This raw data, known as the original series, can be very volatile, making it difficult to identify underlying trends. The ABS therefore publishes two additional data series to aid time-series analysis: seasonally adjusted and trend data in addition to the original (unadjusted) survey estimates.

Trend data helps to determine the underlying path of the series, by smoothing out any irregularities. It is calculated as a 13 month moving average, using data from 6 months prior to and following the reference period.

Seasonally adjusted data has been modified to remove any patterns caused by regularly repeating cycles in the real world, such as the Christmas period, harvesting season, and school holidays. This series aids in short-term forecasting and allows series to be compared between periods; however, can still be volatile.

Graph 1: Trend and seasonally adjusted unemployment rate, Dec 2016 to Dec 2017

	Trend	Seasonally adjusted
Dec 2016	5.7473147	5.7779498
Jan 2017	5.7717365	5.6797967
Feb 2017	5.77148	5.8476282
Mar 2017	5.7463973	5.846752
Apr 2017	5.704758	5.6780906
May 2017	5.6550415	5.5291372
Jun 2017	5.6015714	5.6215402
Jul 2017	5.5513331	5.601343
Aug 2017	5.5135436	5.55033
Sep 2017	5.4869827	5.4533184
Oct 2017	5.4653565	5.400617
Nov 2017	5.4526567	5.4136496
Dec 2017	5.442841	5.5465774

Reliability

As the LFS is a sample survey, the data are subject to sampling and non-sampling error. The ABS takes data quality seriously and makes every effort to minimise error where possible, achieving a response rate of 93%. While the sample is designed to ensure sampling error is as low as possible at the national and state/territory level, it can be higher for labour force regions or for detailed population breakdowns.

International comparisons of Labour Force Surveys

International comparisons of labour statistics are essential in providing a global context to economic analysis, social research and policy formation and evaluation. When comparing data across countries, consideration must be given to the differences in how labour concepts are measured. Since 1919, the International Labour Organisation (ILO) has maintained and developed a system of international labour standards. The ABS provides data about the Australian labour for to groups such as the Organisation for Economic Co-operation and Development (OECD) and ILO, who collate data from multiple countries on a similar basis to allow such cross-country comparisons to occur.

When comparing data across countries, consideration should also be given to differences in the collection methodologies of each country's labour force survey.

Comparison of Labour Force Surveys

	Australia	Canada	New Zealand	United Kingdom	United States
Survey	Labour Force Survey	Labour Force Survey	Household Labour Force Survey	Labour Force Survey	Current Population Survey
Organisation	Australian Bureau of Statistics	Statistics Canada	Statistics New Zealand	Office for National Statistics	Bureau of Labour Statistics
Frequency	Monthly	Monthly	Quarterly	Quarterly	Monthly
Scope	Usually resident, civilians aged 15+	Civilian non-institutionalised population aged 15+	Usually resident, civilian non-institutional populations aged 15+	Permanent residents aged 16-74 years	Usually resident, civilian non-institutional populations aged 16+
Sample Size	Approx. 26 000 dwellings (52 000 persons)	Approx. 56 000 dwellings (100 000 persons)	Approx. 15 000 dwellings (30 000 persons)	Approx. 40 000 dwellings (100 000 persons)	Approx. 60 000 dwellings (112 000 persons)
Population (June, 2016)	24.21 mill.	36.71 mill.	4.70 mill.	58.38 mill.	325.34 mill.
% population in survey	0.21%	0.27%	0.64%	0.17%	0.03%
Working age population (2016)	0.33%	0.42%	0.98%	0.24%	0.05%
Sample rotation	Rotating panel sample design. Selected households remain in the survey for eight consecutive months. A new rotation group is introduced each month to replace an outgoing group (one-eighth of the sample).	Rotating panel sample design. Selected households remain in the survey for six consecutive months. A new rotation group is introduced each month to replace an outgoing group (one-sixth of the sample).	Rotating panel sample design. Selected households remain in the survey for eight consecutive quarters. A new rotation group is introduced each quarter, from the same Primary Sampling Unit, to replace an outgoing group (one-eighth of the sample).	Rotating panel sample design. Selected households respondents are questioned five times at 13 week intervals (consecutive) and one-fifth of the sample is replaced each quarter.	Eight representative rotation groups, each in the sample for eight months total. Each rotation group is included in the sample for two four month periods, separated by an eight month period not in the sample. 75% of the sample is common from month-to-month and 50% one year apart for the same month.
Collection methodology	Personal interview, telephone interview, and online form. Data is collected for each in-scope household member from 'Any Responsible Adult'.	Personal or telephone interview (in English or French). Data collected from person with subsequent a knowledgeable household respondent. Proxy reporting accounts for 65% of collected information.	First interview conducted in person with subsequent interviews via telephone, unless personal interview requested by respondent.	First interview conducted in person, with subsequent interviews via telephone. 35.0% of the interviews in 2015 were carried out by proxy.	Personal interview conducted in first and fifth month (after 8 month dormant period). Other interviews via telephone. Data collected from a responsible adult household respondent.
Response rates	Approx. 93%	Approx. 90%	Approx. 78%	Approx. 49%	Approx. 87%
Topics	Employment, unemployment, underemployment, labour underutilisation, participation, working time, job search, last job and economic inactivity by socio-demographic groups and by region.	Employment, unemployment, underemployment, labour underutilisation, working time, weekly earnings and economic inactivity by socio-demographic groups and by Provinces.	Employment, unemployment, underemployment, labour underutilisation, working time and economic inactivity by socio-demographic groups and by region.	Employment, unemployment, underemployment, labour underutilisation and economic inactivity by socio-demographic groups.	Employment, unemployment, underemployment, labour underutilisation, working time and economic inactivity by socio-demographic groups and by States.

For more information on Labour Force Surveys in other countries, see:

- Bureau of Labor Statistics: www.bls.gov (<https://www.bls.gov/>)
- Office of National Statistics: www.ons.gov.uk (<https://www.ons.gov.uk/>)
- Statistics Canada: www.statcan.gc.ca (<https://www.statcan.gc.ca/>)
- Statistics New Zealand: www.stats.govt.nz (<https://www.stats.govt.nz/>)
- ILO statistics from ILOSTAT: www.ilo.org (https://ilostat.ilo.org/?_afrLoop=570312337601311&_afrWindowMode=0&_afrWindowId=null#!%40%40%3F_afrWindowId%3Dnull%26_afrLoop%3D570312337601311%26_afrWindowMode%3D0%26_adf.ctrl-state%3D1a3hhb7x_4)

For further information, please email labour.statistics@abs.gov.au

Labour force supplementary surveys

A supplementary topic was included with the Labour Force Survey (LFS) for the first time in November 1961, and this concept was gradually extended so that the majority of months in each year included supplementary questions on one or more topics.

Each Labour Force Supplementary Survey (LFSS) comprises a series of additional questions asked at the end of each LFS interview. The survey methodology does not differ greatly among the supplementary surveys, and in many aspects is the same as the LFS methodology (outlined in the section: Labour Force Survey). This section describes the broad survey methodology of the supplementary surveys. They should be used in conjunction with the subsections of this section, which outline elements of the methodology which are unique to each supplementary survey.

From July 2014, the ABS improved and consolidated the content of the LFS and labour supplementary surveys. See [Information Paper: Outcomes of the Labour Household Surveys Content Review, 2012](#) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/6107.0>) and [Forthcoming changes to ABS Labour Force and Supplementary Surveys](#) (<https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts>)

for more information.

The Characteristics of Employment Survey (COE) combines the key elements from the previous separate Employee Earnings, Benefits and Trade Union Membership Survey (EEBTUM), Forms of Employment Survey (FOES) and Working Time Arrangements Survey, to provide a comprehensive and coherent dataset on characteristics of persons' employment.

The Participation, Job Search and Mobility (PJSM) Survey combines the key elements from the previous separate Persons Not in the Labour Force Survey (PNILF), Underemployed Workers Survey (UEW), Job Search Experience Survey (JSE) and Labour Mobility Survey (LM), to provide a comprehensive and coherent dataset on persons' experiences relating to job search, job change and increasing participation.

Objectives of the labour force supplementary surveys

The LFSSs form an important component of the ABS's household surveys program, which aims:

- to provide a range of statistics required to monitor the social and economic wellbeing of Australians, with particular reference to important sub-groups of the population; and
- to support the development, implementation and evaluation of policies and programs of key Commonwealth and State government agencies.

The information requirements of ABS household surveys are determined on the basis of submissions from users on their needs for and uses of household survey data. They also reflect ABS deliberations on what is required of a national statistics program in the various subject fields, based on user contact and consultation.

In the field of labour statistics, supplementary surveys provide detailed information on a range of labour topics and interest groups such as:

- labour force - labour force experience,
- employment - underemployment; multiple job holding; forms of employment,
- employees - earnings; trade union membership; benefits; and working arrangements,
- unemployment - job search experience; successful and unsuccessful job search,
- persons not in the labour force - discouraged job seekers; other persons with marginal attachment to the labour force, and
- persons retrenched or made redundant from work.

Current and historical supplementary survey statistical releases

Publication	Catalogue Number	Frequency	Data Availability
Characteristics of Employment, Australia (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6333.0)	6333.0	Annual	This product replaces the publications: Employee Earnings, Benefits and Trade Union Membership, Australia; Forms of Employment, Australia; Working Time Arrangements; and Locations of Work.
Characteristics of Recent Migrants, Australia (https://www.abs.gov.au/AUSSTATS/5Cabs@.nsf/0/E92EA270A32AF8F1CA256953007D9AFA?OpenDocument)	6250.0	Irregular	This product replaces the publication Labour Force Status and Other Characteristics of Migrants, Australia.
Child Employment, Australia (https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6211.0Jun%202006?OpenDocument)	6211.0	Irregular	Current
Education and Work, Australia (https://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/6227.0/)	6227.0	Annual	Current
Employee Earnings, Benefits and Trade Union Membership, Australia (https://www.abs.gov.au/AUSSTATS/abs@.nsf/LatestProducts/6310.0Main%20Features2August%202013?OpenDocument&tabname=Summary&prodno=6310.0&issue=August%202013&num=&view=)	6310.0	Annual	This product has been replaced by Characteristics of Employment
Forms of Employment, Australia (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6359.0)	6359.0	Annual	This product has been replaced by Characteristics of Employment
J (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6222.0) ob Search Experience, Australia (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6222.0)	6222.0	Annual	This product has been replaced by Participation, Job Search and Mobility, Australia
Labour Force Experience, Australia (https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6206.0Main+Features1Feb%202011?OpenDocument)	6206.0	Biennial	Discontinued
Labour Mobility, Australia (https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6209.0Main+Features1February%202012?OpenDocument)	6209.0	Biennial	This product has been replaced by Participation, Job Search and Mobility, Australia
Locations of Work, Australia (https://www.abs.gov.au/ausstats/abs@.nsf/PrimaryMainFeatures/6275.0?OpenDocument)	6275.0	Irregular	This product has been replaced by Characteristics of Employment
Multiple Jobholding, Australia (/www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6216.0Aug%201997?OpenDocument)	6216.0	Irregular	Latest data available on request July 2001
Participation, Job Search and Mobility, Australia (https://www.abs.gov.au/ausstats/5Cabs@.nsf/0/49A83FBC3DF528ACA257FD800129321?OpenDocument)	6226.0	Annual	This product replaces Persons Not in the Labour Force; Underemployed Workers and Job Search Experience, Australia; and Labour Mobility, Australia
Persons Not in the Labour Force, Australia (https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6220.0Main+Features1September%202013?OpenDocument)	6220.0	Annual	This product has been replaced by Participation, Job Search and Mobility, Australia
Persons Not in the Labour Force, Underemployed Workers and Job Search Experience, Australia (https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6226.0.55.001Main+Features1February%202014?OpenDocument)	6226.0.55.001	One-off (Bridge)	This product has been replaced by Participation, Job Search and Mobility, Australia. Originally, this product replaced the publications: Persons Not in the Labour Force, Australia; Underemployed Workers, Australia; and Job Search Experience, Australia
Pregnancy and Employment Transitions, Australia (https://www.abs.gov.au/ausstats/abs@.nsf/mf/4913.0)	4913.0	Irregular	Current
Underemployed Workers, Australia (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6265.0)	6265.0	Annual	This product has been replaced by Participation, Job Search and Mobility, Australia
Working Time Arrangements, Australia (https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6342.0Main+Features1November%202012?OpenDocument)	6342.0	Irregular	This product has been replaced by Characteristics of Employment

Labour Multipurpose Household Survey topics

The Multipurpose Household Survey (MPHS) was introduced in 2004–05. The MPHS is conducted each financial year throughout Australia as a supplement to the ABS' monthly Labour Force Survey (LFS). The MPHS topic questions are asked each month from July to June in a personal interview. The MPHS is designed to provide statistics annually for a number of small, self-contained topics.

The MPHS collects detailed information on a number of labour market issues, including:

- [Barriers and Incentives to Labour Force Participation \(/statistics/labour/employment-and-unemployment/barriers-and-incentives-labour-force-participation-australia/latest-release\)](/statistics/labour/employment-and-unemployment/barriers-and-incentives-labour-force-participation-australia/latest-release) (conducted every two years, commencing with 2004–05);
- [Retirement and Retirement Intentions \(/statistics/labour/employment-and-unemployment/retirement-and-retirement-intentions-australia/latest-release\)](/statistics/labour/employment-and-unemployment/retirement-and-retirement-intentions-australia/latest-release) (conducted every two years, commencing with 2004–05);
- [Work Related Injuries \(/statistics/labour/earnings-and-work-hours/work-related-injuries/latest-release\)](/statistics/labour/earnings-and-work-hours/work-related-injuries/latest-release) (conducted every four years, commencing with 2005–06); and
- [Qualifications and work \(/statistics/people/education/qualifications-and-work/latest-release\)](/statistics/people/education/qualifications-and-work/latest-release).

In addition to the labour-related topics mentioned above, the MPHS program also includes other social topics not related to labour statistics, such as:

- Crime victimisation;
- Participation in sport and physical activity;
- Environmental views and behaviours;
- Patient experiences in Australia; and
- Household use of information technology.

For all MPHS topics, general demographic information such as age, sex, labour force characteristics, education and income are also available.

This section describes the broad survey methodology of the MPHS. For information on the four labour related MPHS topics that have been conducted to date, see the following sub sections: Barriers and Incentives to Labour Force Participation; Retirement and Retirement Intentions; Work-Related Injuries; and Qualifications and Work.

Objectives of the Multipurpose Household Survey

The MPHS topics are an important part of the ABS household surveys program, which aims to:

- provide a range of statistics needed to monitor the social and economic wellbeing of Australians, with particular reference to important sub-groups of the population; and
- support the development, implementation and evaluation of policies and programs of key Commonwealth and State government agencies.

The information requirements of MPHS topics are determined on the basis of submissions from users on their needs for, and uses of, household survey data. They also reflect ABS deliberations on what is required of a national statistics program in the various subject fields, based on user contact and consultation.

The MPHS is a flexible multi-topic survey vehicle, which is used to collect and output data in a timely fashion. The MPHS includes a number of topics that require personal interview (rather than using the any responsible adult (ARA) method), and are therefore unsuited to the monthly supplementary survey program. The MPHS has a shorter development and output time than the special social surveys to achieve flexibility in responding to user demands as they arise, and to allow the ABS to respond to emerging demand and contemporary priorities in a timely way (publications are usually available within six months of the completion of data collection).

The MPHS is conducted as a supplement to the monthly LFS. Each month one eighth of the households in the LFS sample are rotated out of the survey. Generally, around 80% of these rotating-out households are then selected for the MPHS each month. In these households, after the LFS has been fully completed for each person in scope and coverage, a person aged 15 years and over is selected at random (based on a computer algorithm) and asked the additional MPHS topic questions in a personal interview. In cases where the MPHS topic is age sensitive, permission is sought from a parent or guardian before conducting the personal interview with a person aged 15 – 17. If permission is not given, the parent or guardian may be asked on behalf of the 15 – 17 year old, but are not asked questions relating to opinions/perceptions.

Unlike LFS which collects information from all members of the household from any responsible adult, the MPHS uses a randomly selected member of the household to answer questions about themselves.

Data are collected using Computer Assisted Interviewing (CAI), whereby responses are recorded directly onto an electronic questionnaire in a notebook during a telephone, face-to-face personal interview or online self-completion.

Data for MPHS topics are collected each month over a financial year. This reduces the impact of any seasonal effects on the data.

Census of Population and Housing

The Census of Population and Housing is conducted every five years to measure the number of people in Australia on Census night, their key characteristics and the households and dwellings in which they live. By collecting lots of information in a standardised way, from the country as a whole, the Census provides a rich and detailed snapshot of Australia. Australia's seventeenth (and most recent) national Census was conducted on 10 August 2021.

The Census and the Labour Force Survey (LFS) both measure information about the labour market activity of persons aged 15 years and over. While both collections measure the same concepts surrounding the labour force in Australia, there are a number of differences between the two that should be considered when comparing the data, as statistics produced from these collections are not the same.

Labour-related topics on the 2016 Census include: labour force status, status in employment, employment type, occupation, industry of employment, hours worked, place of work and method of travel to work. For unemployed persons, information is collected on whether looking for full-time or part-time work.

Purpose of Census and the Labour Force Survey

The Census provides a rich snapshot of all people living in the country on Census night. It is the leading source of information for small population groups and areas, and allows for the analysis of labour market activities and industry and occupation data at a more detailed level. The Census also collects information about a range of characteristics of people, including, but not limited to, their labour force status, enabling analyses across a broader range of socioeconomic dimensions.

However, the Labour Force Survey produces the most authoritative and recent estimates of labour market information, including employment and unemployment. Labour force statistics are published monthly by the ABS in Labour Force, Australia (cat no. 6202.0). The Labour Force Survey is designed specifically to measure changes over time in the Australian labour force, and to provide a high quality measure for use in international comparisons. It provides a highly accurate estimate of key labour force statistics of the Australian economy, including employment, unemployment and underemployment, as well as a range of more detailed labour market-specific data.

The Labour Force Survey is the leading source of data for monitoring Australia's labour market conditions.

Understanding differences between the LFS and Census

Scope and coverage

The Census includes everyone who is in Australia on Census night, regardless of age, with the exception of foreign diplomats and their families. Visitors to Australia are counted regardless of how long they have been in the country, or how long they plan to stay. Persons present in Australian offshore territories (Jarvis Bay, Christmas Island and Cocos Keeling Islands and Norfolk Island) are included in the Census. Thus, babies and children under the age of 15, Australian defence force members, tourists, students, working holiday makers and other temporary residents are counted in the Census. However, the Census excludes Australian residents who are out of the country on Census night.

In contrast, the scope of the LFS is limited to all persons aged 15 years and over, excluding members of the permanent defence forces, certain diplomatic personnel of overseas governments, overseas residents in Australia, short term visitors, short term students and members of non-Australian defence forces (and their dependants) stationed in Australia. However, the LFS includes resident who are temporarily overseas for less than 6 weeks.

Collection methodology

The greatest difference in collection methodology between the Census and the Labour Force Survey is the questionnaires that are used. The Census questionnaire covers a broad range of topics across a range of social and economic domains, while the Labour Force Survey is specifically designed to produce labour statistics.

In addition to having a greater multi-topic focus to its design, the Census must also necessarily use as few questions as possible for each individual topic, to a much greater extent than is the case with the Labour Force Survey and other household surveys. For example, the data item 'Labour Force Status' is derived in the Census based on only four questions, while the Labour Force Survey questionnaire includes an extensive range of questions to measure Labour Force Status with a much greater level of precision. In particular, the Census count of unemployed people is higher than the corresponding Labour Force estimate, given it is not possible to measure the distinction between someone who is unemployed and not in the labour force with the same level of precision.

Lastly, the Census, by necessity, given its size, involves all households self-completing online or paper questionnaires. In contrast, the Labour Force Survey is able to offer a mixture of modes to respondents, including interviews by highly trained interviewers (either over the telephone or face-to-face) or self-completion online questionnaires, according to their preference, to elicit the most precise responses to the detailed questions that are asked.

Treatment of non-response

To account for unreturned Census forms, demographic characteristics of persons in non-responding households are either imputed or included in the 'not stated' category. However, Labour Force Status is not imputed and data are not adjusted for non-responding households.

Issues with response or coverage in the Census are identified through the Post Enumeration Survey, which is conducted a few weeks after the Census to estimate the number and characteristics of people either not counted or counted multiple times on Census night.

In contrast, only fully responding households contribute to Labour Force Survey estimates. Non-responding households are treated as 'not stated' and excluded and adjusted for through the weighting process. As a sample survey, it is then weighted to an independent population benchmark based on the Estimated Resident Population (ERP), which ensures estimates add up to an independently estimated distribution of the usual resident civilian population aged 15 years and over, regardless of any sample lost due to non-response.

Business surveys

This section provides an overview of the survey methodology used in ABS labour-related business surveys. Business surveys are the primary source of data on labour costs, earnings, job vacancies and industrial disputes, all of which provide insight into the demand for labour in the Australian labour market.

Business surveys falling within the labour statistics program collect information from employing businesses on a range of topics. The program includes:

- [Average Weekly Earnings Survey \(/statistics/labour/earnings-and-work-hours/average-weekly-earnings-australia/latest-release\)](#)
- [Employee Earnings and Hours Survey \(/statistics/labour/earnings-and-work-hours/employee-earnings-and-hours-australia/latest-release\)](#)
- [Survey of Job Vacancies \(/statistics/labour/employment-and-unemployment/job-vacancies-australia/latest-release\)](#)
- [Industrial Disputes \(/statistics/labour/earnings-and-work-hours/industrial-disputes-australia/latest-release\)](#)
- [Wage Price Index \(/statistics/economy/price-indexes-and-inflation/wage-price-index-australia/latest-release\)](#)
- [Survey of Employment and Earnings \(/statistics/labour/employment-and-unemployment/employment-and-earnings-public-sector-australia/latest-release\)](#) (public sector only from 2002)

- [Survey of Major Labour Costs \(/statistics/economy/finance/labour-costs-australia/latest-release\)](https://www.abs.gov.au/statistics/economy/finance/labour-costs-australia/latest-release)

For specific information each of these surveys, refer to the methodology pages for each statistical release.

Scope and coverage

The scope of ABS labour-related surveys varies across collections. Most ABS labour-related business surveys draw upon the ABS Business Register (ABSBR), which is sourced from the Australian Taxation Office's Australian Business Register (ABR). The scope of surveys which use the business register is restricted by the scope and coverage of the register itself (as outlined in the next section). Surveys with broader or different scope are required to either supplement the business register, or use a sample that has been composed independently of the register by using relevant alternative data sources.

The following groups are generally excluded from labour-related business surveys:

- Employing businesses in the Agriculture, Forestry and Fishing industry (Australian and New Zealand Standard Industrial Classification (ANZSIC) Division A), in line with the International Labour Organisation (ILO) Resolution from the Twelfth International Conference of Labour Statisticians 1973. Given that "hired labour constitutes only a minor part of total labour input" in this industry, it would be disproportionately costly to survey a sufficient number of these businesses to obtain a sample of employees to adequately represent this industry.
- Private households employing staff (ANZSIC subdivision 96). Not all private households employing staff are required to register with the Australian Taxation Office (ATO), and as a result of this there is incomplete coverage on the business register and these units are excluded.
- Foreign government representation in Australia (ANZSIC class 7552). Practical collection difficulties and the low numbers of Australian employees involved have resulted in the exclusion of this industry group from the labour-related business surveys.
- Members of Australian permanent defence forces.
- Employing organisations located outside Australia.

ABS business register

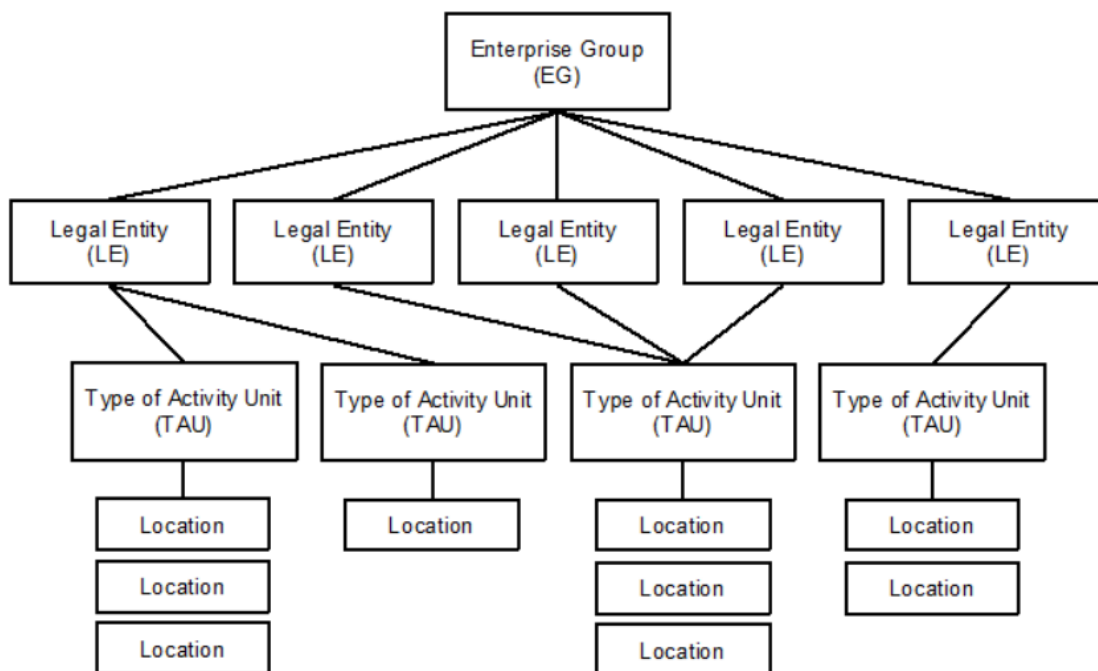
The ABSBR is a list of businesses and organisations operating in Australia, and is based on the ABR. Organisations are included on the ABR when they register for an Australian Business Number (ABN). The ABSBR is used to create frames for the various business surveys run by the ABS and consists of two populations; the profiled population, and the non-profiled population. Organisations which are considered sufficiently complex and significant are included in the profiled population. They are structured according to the ABS Economic Units Model (ABSEUM), using information provided by the organisations. Organisations in the non-profiled population have less complex structures, and are based largely on ABR information.

Statistical units

Statistical units are used to represent one member of the population being surveyed. Statistical units on the ABSBR are based on the ABSEUM. The ABSEUM (see Figure 23.1) has four statistical unit levels that are commonly applied in collections: the Enterprise Group; the Legal Entities that belong to that group; the Type of Activity Units that these legal entities carry out; and the location where these economic activities take place.

- Enterprise Group (EG) covers all the operations within Australia's economic territory of legal entities under common control.
- Legal Entity (LE) covers all the operations in Australia of an entity which possesses some or all of the rights and obligations of individual persons or corporations, or which behaves as such in respect of those matters of concern for economic statistics. Examples of legal entities include companies, partnerships, trusts, sole (business) proprietorships, government departments and statutory authorities. In most cases the LE is equivalent to a single ABR registration.
- Type of Activity Unit (TAU) comprises one or more legal entities, sub-entities or branches of a legal entity that can report productive and employment activities. TAUs are created if accounts sufficient to approximate Industry Value Added (IVA) are available at the ANZSIC subdivision level.
- Location is a single, unbroken physical area from which an organisation is engaged in productive activity on a relatively permanent basis, or at which the organisation is undertaking capital expenditure with the intention of commencing productive activity on a relatively permanent basis at some time in the future.

ABS Economics units model



For the compilation of statistics, the ABS has developed an Economics Units Model to further describe and categorise enterprises and their components. This is displayed in Figure 23.1. The Units Model is a tiered structure, containing four levels: Enterprise Group which is an institutional unit which contains one or more legal entities under common control and covers all of their collective activities in Australia; Legal Entities: Is an institutional unit which covers all activities in Australia of a single entity which possesses some or all of the rights and obligations of individual persons or corporations, or which behaves as such in respect of those matters of concern for economic units. In most case the LE is equivalent to a single Australian Business Number (ABN) registration; Type of Activity Units: Is a producing unit comprised of one ore more legal entities that can report productive and employment activities, and are homogenous in their activity; and Location Units: The Location Unit is comprised of a single, unbroken physical area from which an organisation is engaged in productive activity on a relatively permanent basis.

Sample design and selection

Business surveys undertaken by the ABS fall under two categories: probability sample surveys (information is collected from a random sample of units on the frame), and censuses (information is collected from all units on the frame). With the exception of the Industrial Disputes collection, all labour-related business surveys are probability sample surveys which construct their frame from the ABSBR. The Industrial Disputes collection aims to be a census of all stoppages, and businesses involved in these stoppages are identified through media monitoring and observation of disputes from multiple sources (see the section: Industrial Disputes Collection for more details).

When a sample is selected for an ABS business survey, a survey frame must first be drawn from the ABSBR. From that point, the survey frame is then divided (stratified) into groups with similar characteristics, known as strata. The stratification variables typically used in the labour-related business surveys include: state, industry and employment size. The sector (public/private) stratification variable may also be used in some collections. After this, a small number of strata containing large or highly variable units are completely enumerated (CE). For each of the remaining strata, a simple random sample of units is selected. Some strata with a small population are also CE.

The Survey of Employee Earnings and Hours (EEH) uses an additional step in its sample selection that involves asking businesses to select a random sample of employees from their payrolls using instructions provided by the ABS (see the section Survey of Employee Earnings and Hours for more details).

There are various constraints placed on sample selection. For most labour-related business surveys, sample selection is constrained by ensuring that a portion of the sample that is not CE is rotated, and that small businesses will be in the sample for no more than 12 successive quarters. Some surveys are further constrained by ensuring that there is either minimal or maximal overlap with other surveys.

Sample sizes vary across ABS labour-related business surveys. In determining the required sample size for each survey, factors such as required accuracy level, expected level of non-response and total cost are taken into consideration.

Collection methods

Most ABS labour-related business surveys use an electronic collection methodology, using internet based survey forms. Data from some surveys are collected through the mail-out/mail-back or the telephone interview collection methodology.

In the event of non-response, intensive follow-up procedures that involve reminder letters and telephone contact are undertaken. 'Priority' intensive follow-up is used for a number of surveys; this involves targeting the following types of non-responding units:

- Units that contribute significantly to estimates;
- Newly selected units (e.g. in ongoing surveys); and

- Units that did not respond in the previous survey cycle.

Estimation

The estimation procedure is the application of weights to individual survey records so that the whole target population is represented (see the section: Overview of Survey Methods for more information). For ABS business surveys, the values of these weights are determined by one or more of the following factors:

- Probability weighting: the probability of selection for each survey unit.
- Ratio estimation: adjustments to agree with population benchmarks to correct for imbalances in the characteristics of the selected sampled units.
- New business provisions: adjustments to account for deficiencies with the survey frame, such as missing units.
- Adjustment for non-response: to correct for further imbalances in the characteristics of responding sample units.

Number-raised estimation and ratio estimation are the two main techniques used in surveys constructing their frame from the ABSBR. The labour-related business surveys use stratum-by-stratum ratio estimation in strata where the population benchmark is known, and sampling efficiencies achievable are greater than with number-raised estimation. For strata where benchmark information is not available, number-raised estimation is used. See the section: Overview of Survey Methods for more information.

New business provisions are used in the estimation process to allow for births of businesses that have occurred up to the end of the survey reference period, but are not reflected on the survey frame. The calculation of the contribution of a new business is based on the average contribution of estimates of like units already on the frame. In the case of labour-related business surveys, the annual Survey of Employment and Earnings (Public Sector) does not allow for new business provisions, as data is collected from public sector units only. The Industrial Disputes collection is a census collection, and does not use weighting.

Editing and non-response adjustment

Editing is used in ABS business surveys to correct a number of non-sampling errors such as misunderstanding of questions or instructions, miscoding, non-availability of data, incorrect transcription, non-response and non-contact. Editing and further investigation is performed on estimates where anomalies have been detected. Significance editing is used by some labour-related business surveys, and reduces the overall editing load for the survey while maximising the effectiveness of editing on survey estimates. Significance editing involves assessing each survey value that requires editing against how greatly the survey estimate will be affected by using the unedited value. Only those values which will significantly affect the survey estimate are then edited.

Adjustments for non-response are made in the estimation process for all business surveys. There are two categories of non-response for ABS business surveys: partial non-response, and complete non-response. The extent to which values are imputed depends upon the amount and the quality of data already provided.

Imputed values can be derived for business surveys from three sources. The first source is data provided by the particular unit to be imputed for, which may be in the form of data previously provided or current data with partial response. The second source is similar to the first and involves the use of auxiliary information known about the unit, such as tax data from the frame. The third source is data provided by other units believed to have similar responses to the missing data. For complete non-responses and refusals in completely enumerated strata, all data items for the unit are imputed, preferably from previously provided data. Alternatively, where no useful information exists to use in imputation, the weights may be adjusted to account for non-response.

Two main methods for the treatment of outliers are used in ABS business surveys: Surprise Outliering and Winsorisation.

Administrative data

The ABS regularly uses administrative data to support the collection of data in business and household surveys. The ABS also uses combined data assets, such as those supplied by the Australian Tax Office (ATO), to develop labour statistics to provide unique insights into the Australian labour market from both a jobholder and employer perspective:

- [Jobs in Australia \(/statistics/labour/earnings-and-work-hours/jobs-australia/latest-release\)](/statistics/labour/earnings-and-work-hours/jobs-australia/latest-release) (produced from the Linked Employer Employee Dataset)
- [Personal Income in Australia \(/statistics/labour/earnings-and-work-hours/personal-income-australia/latest-release\)](/statistics/labour/earnings-and-work-hours/personal-income-australia/latest-release) (produced from the Linked Employer Employee Dataset)
- [Weekly Payroll Jobs and Wages in Australia \(/statistics/labour/earnings-and-work-hours/weekly-payroll-jobs-and-wages-australia/latest-release\)](/statistics/labour/earnings-and-work-hours/weekly-payroll-jobs-and-wages-australia/latest-release) (WPJW)

More granular demographic and employer characteristics are available in these statistics than in survey based outputs, providing detailed insights into jobs, jobholders, wages and income.

ATO administrative data assets used in the generation of these labour statistics include:

- Australian Business Register
- Business taxation information (BIT) for owner managers of un-incorporated enterprises
- Client Register (CR)

- PAYG payment summary
- Personal Income Tax return (PIT)
- Single Touch Payroll (STP)

Differences from traditional collection methods

Administrative datasets are not typically designed with statistical production in mind. The underlying concepts relate to administrative policy or procedures, rather than statistical constructs. This can result in coverage, definition and quality differences compared to survey based outputs.

Administrative data can cover large populations in more detail and therefore provide different levels of insight than traditional collection methods. However, administrative data can capture very specific populations or sub-populations, compared to surveys which collect information from a representative sample of the population.

While more detailed statistics are available, the estimates may present unique views of the population, particularly where adjustments are not applied to broaden the population represented.

In addition to more variable reporting quality, administrative datasets are significantly larger than those obtained from business and household surveys. The timeliness of outputs is weighed against the quality assurance of individual records. As such, the increased speed of statistical production may require macro level adjustments to address anomalous reporting (such as in WPJW). Where more time and information are available to resolve anomalous records, micro level adjustments may be in use.

Producing statistics from administrative data requires an alternative approach to processing and quality assurance than those used in survey based statistics. However, administrative datasets are an increasingly valuable source of new data, providing a rich variety of alternative insights into the labour market.

More information on the methodologies supporting the current suite of Labour statistics derived from administrative data can be found in the respective statistical releases: [Jobs in Australia \(/statistics/labour/earnings-and-work-hours/jobs-australia/latest-release#methodology\)](#) ; [Personal Income in Australia \(/statistics/labour/earnings-and-work-hours/personal-income-australia/latest-release#methodology\)](#); and [Weekly Payroll Jobs and Wages in Australia. \(/statistics/labour/earnings-and-work-hours/weekly-payroll-jobs-and-wages-australia/latest-release#methodology\)](#).

Linked Employer-Employee Dataset (LEED)

The Linked Employer Employee Dataset (LEED) is a cross-sectional database which is built using Australian Tax Office (ATO) administrative data linked to ABS [Business Longitudinal Analytical Data Environment \(BLADE\) \(/about/data-services/data-integration/integrated-data/business-longitudinal-analysis-data-environment-blade\)](#).

The LEED enables simultaneous analysis of met supply and demand in the Australian labour market, through:

- providing supplementary labour statistics and facilitates labour market research at industry and regional levels.
- enabling analysis of the Australian labour market at macro and micro levels;
- enabling analysis of how specific events impact employees and employers;
- helping to understand structural changes in the labour market.

The LEED consists of three cross-sectional files:

- a person file;
- a jobs file; and
- an employer file.

The LEED associates information about a person with information about their employing business. This is done by establishing the existence of a job. An employed person can have one or more jobs throughout the year with one or more employers, some of which may be held concurrently with others. A job can be created either by an employing business or the personal enterprise of the individual (an owner manager).

LEED overview

Scope

The LEED contains information for all persons who interacted with the Australian taxation system with reference to financial years after 2011-12. The LEED includes data for all persons who either:

- submitted an individual tax return (ITR); or
- individuals who had a Pay As you Go (PAYG) payment summary issued by an employer and then remitted to the ATO.

Employees who did not submit a tax return and have not provided their Tax File Number to their employer will not appear in the LEED. Owner managers of unincorporated enterprises (OMUEs) who did not submit an ITR are also excluded.

The LEED includes all employers present on the BLADE who have at least one employee linked to them. Some small businesses are excluded from the BLADE (e.g. those that do not meet the turnover threshold at which they must register for Goods and Services Tax) and do not appear on the LEED. Synthetic records are created for these records where they are both unincorporated and owned by an Owner Manager of an Unincorporated Enterprise present on the LEED.

The LEED includes all sources of income, regardless of whether the income provider resides within Australia's economic territory.

Integration methodology

Initial data cleaning is undertaken to remove duplicate and erroneous records. In particular, job records are repaired to minimise the impact of administrative noise on output statistics, such as annual payment summaries issued in two separate parts.

Before the linkage takes place, an input job level file is created largely based on the PAYG payment summary file. This file is also enhanced with job records derived using ITR information, to cover jobs without payment summary information, such as OMUE jobs. Data quality is enhanced by using occupation information from ITR, and the best available age, sex, and geographic information between the PAYG, ITR and CR data.

Jobs are integrated with the employer by one of two methods. The method is dependent on which ABS Business register population the employer is grouped into.

Non-profiled population (businesses with a simple structure): a deterministic approach using the Australian Business Number (ABN).

Profiled population (businesses with a complex structure): a more detailed approach to linking is used, detailed below.

Where an employer is part of the profiled population, the relevant jobs are assigned to the type of activity units based on a logistic regression model developed using 2016 Census data. The model references independent variables common to both Census and personal income tax data, including sex, age, occupation, and region of usual residence. These are used to predict the industry of employment, which conceptually aligns to a type of activity unit.

Where an employee has multiple job relationships with the same reporting ABN in an enterprise group, each job relationship is assigned to the same type of activity unit.

Based on the model, each job record is assigned a probability of being in any of the type of activity units present in the employing enterprise group. Iterative random assignment is undertaken using these probabilities until employment benchmarks are met. Benchmarks are based on Quarterly Business Indicators Survey (QBIS) data where a unit is in scope. Otherwise, BLADE employment levels are substituted where possible, otherwise no benchmarking is done.

The above process is applied to link the different input datasets for each financial year. Records have not been integrated across years and therefore, the LEED is a cross-sectional database and is not longitudinal.

Legislative environment

The LEED incorporates:

- person level ITR data, job level PAYG payment summary data and Client Register data supplied by the ATO to the ABS under the Taxation Administration Act 1953 - which requires that such data is only used for the purpose of administering the Census and Statistics Act 1905; and
- employer level data that include the ABS's BLADE data and the [ABS Business Register \(https://www.abs.gov.au/ausstats/abs@.nsf/_dossbytitle/AC79D33ED6045E88CA25706E0074E77A?OpenDocument\)](https://www.abs.gov.au/ausstats/abs@.nsf/_dossbytitle/AC79D33ED6045E88CA25706E0074E77A?OpenDocument) data supplied by the Registrar of Australian Business Register (ABR) to the ABS under A New Tax System (Australian Business Number) Act 1999 - which requires that such data is only used for the purpose of carrying out the functions of the ABS.

The data limitations or weakness outlined here are in the context of using the data for statistical purposes, and not related to the ability of the data to support the ATO's or ABR's core operational requirements.

Legislative requirements to ensure privacy and secrecy of these data have been followed. In accordance with the Census and Statistics Act 1905, results have been confidentialised to ensure they are not likely to enable identification of a particular person or organisation. All personal information is handled in accordance with the Australian Privacy Principles contained in the Privacy Act 1988.

ABS data integration practices comply with the High Level Principles for Data Integration Involving Commonwealth Data for Statistical and Research Purposes.

The LEED is comprised of a person file, a job file and an employer file

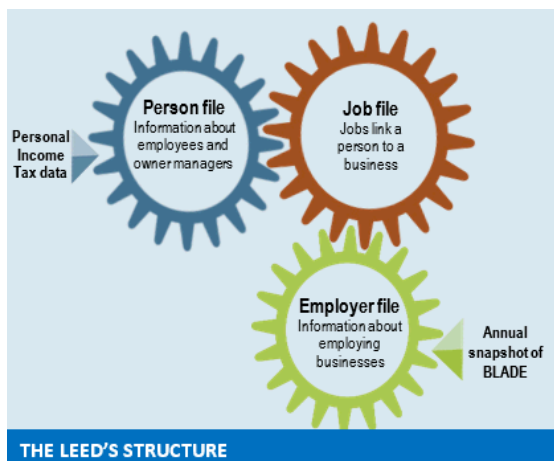


Figure 1 gives an overview of the LEED and shows how it is cross-sectional database. It is comprised of a person file, a job file and a business (employer) file. The LEED includes person and employer level information provided to the ABS by the ATO and the Registrar of the Australian Business Register (ABR). LEED uses this data via the Business Longitudinal Analysis Data Environment (BLADE). The persons file classifies persons as either not employed or employed. The jobs file is a complete list of the job relationships held at any time during the reference year. Whilst the employer file contains all employers in a job relationship with someone on the person file at any point during the reference year.

Person file

Each person file contains data for all persons who either submitted an Individual Tax Return (ITR) or who were identifiable on a payment summary in the reference year. Each record includes de-identified demographic and geographic data, and aggregate income information.

Employed persons may be either employees (including Owner Manager of Incorporated Enterprises or OMIEs), Owner Managers of Unincorporated Enterprises (OMUEs), or both. Employees are identified by the presence of aggregate employee income and at least one linked employee job.

Employees who have not submitted an ITR but who have provided their Tax File Number to their employer are imputed from Pay As You Go payment summary data.

OMUEs are identified by the presence of any of the own unincorporated business income types and a linked OMUE job.

Tax lodgers who are not employees or owner managers (such as persons with only investment incomes) are included on the person file to support statistical analysis that requires a more complete view of the tax lodger population.

Jobs file

The jobs file is a complete list of the job relationships held at any time during the reference year. It is constructed primarily from Pay As You Go (PAYG) payment summary data. PAYG payment summaries describe the payments made to an individual by an employer within a financial year. Conceptually, payment summary data should include most employee/employer job relationships. OMUE jobs are derived from ITR data and are added to the jobs file, some of these link to businesses in the Business Longitudinal Analysis Data Environment (BLADE).

The LEED jobs file does not capture voluntary jobs and unpaid contributing family worker jobs.

In some cases a synthetic employee job record has been created based on information in the person file. This has occurred when a person has recorded wage or salary information that cannot be identified in payment summary data. Sometimes, an employee job may not be able to be linked to an employing organisation due to reporting errors or missing information.

A person can hold several jobs during the year, either concurrently (as a multiple job-holder) or consecutively. For a person who is an employee of several employers, each relationship is listed as a separate job. Due to data limitations, only one self-employment job can be recorded for any OMUE even if a person owns and manage more than one enterprise. An OMUE can hold other jobs as an employee.

Data on multiple job holders can also be found in the Labour Account Australia, however there are a number of differences between the two sources.

PAYG payment summary start and end dates are used to

- determine the start and end of a job relationship,
- identify concurrent job-holding, and
- determine the duration of the job.

These dates are known to have high measurement error rates, which are likely to inflate job and concurrent job counts. Some of this error may be due to misinterpretation and recording errors, but it is also expected that payroll system and report design have an influence.

Some treatments have been applied to address over counts of jobs or concurrent job-holding, including:

- In cases where a person has received several PAYG payment summaries from the same employer, and the time between the end of the first payment summary and the start of the next payment summary is 31 days or less, this is counted as a single job.
- In cases where a person has received several PAYG payment summaries from different employers, they are only considered to be concurrent if they overlap by more than 31 days.
- In cases where a person has more than 10 jobs, those within the same industry sub-division (2-digit ANZSIC industry) are counted as a single job in the 2011-12 to 2016-17 data. From 2017-18 reference year, a lower level of industry classification - those within the same industry class (4-digit ANZSIC industry), was used to collapse jobs. This change has improved data quality but has brought in a negligible increase to the number of total jobs reported compared with reported numbers in the old approach.

These treatments are aimed at minimising the impact of administrative errors while also reflecting a reasonably accurate view of differing job structures.

Employer file

In the LEED, an employer is identified when a job has been linked to any legal entity in the non-profiled population or any type of activity unit in the profiled population.

The employer file contains business units present in BLADE that could be linked to a job, as well as unincorporated entities. Some unincorporated entities are identified in personal income tax data and are not otherwise included in BLADE or cannot be identified in BLADE. Industry and several other employer variables are not available for these unincorporated entities.

LEED outputs

Key outputs

The LEED provides cross-sectional information relating to employees and owner managers of unincorporated enterprises

Key data/series include:

- Employed persons and their jobs (employees and owner managers of unincorporated enterprises)
- Multiple job holders
- Income at job and person levels
- Regional spotlights of jobs and employed persons

Other data includes (but is not limited to):

For people with income:

- Income types: Total, Employee, Investment, Own unincorporated business, Superannuation
- Counts of earners
- Distributional information: mean, median, quartiles, percentile ratios, gini coefficient, income share
- Geography - region of residence (at State and Territory, Local Government Area, Statistical Area 4, 3, and 2 levels)
- Demographic information: age, sex

In addition, for persons with jobs:

- Counts: Employed persons, Jobs, Employees, Owner-Managers of Unincorporated Enterprises, Multiple job holders
- Status in employment: Employee, Owner-manager of Unincorporated Enterprise
- Income: Employment, Employee, Own Unincorporated Business, Duration adjusted income per job (annualised)
- detailed occupation and skill levels of persons
- detailed industry of job
- Sector (public/private)
- Number of jobs held (employee jobs and owner manager of unincorporated enterprise jobs)
- Duration of jobs
- Concurrent and non-concurrent jobs

Information relating to employers:

- employment size
- detailed industry of business activity
- type of legal organisation (TOLO)
- institutional sector (SISCA)

Statistical releases

LEED data is disseminated through the publications listed below. Additional data is available through Customised Data Requests.

[Jobs in Australia \(/statistics/labour/earnings-and-work-hours/jobs-australia/latest-release\)](https://www.abs.gov.au/statistics/labour/earnings-and-work-hours/jobs-australia/latest-release)

Frequency: Annual, from 2011-12

Jobs in Australia (JIA) provides aggregate statistics from the Linked Employer-Employee Dataset. It provides information about filled jobs in

Australia, the people who hold them, and their employers. JIA provides data across 2,288 Statistical Areas as well as Local Government Areas.

[Personal Income in Australia \(/statistics/labour/earnings-and-work-hours/personal-income-australia/latest-release\)](/statistics/labour/earnings-and-work-hours/personal-income-australia/latest-release)

Frequency: Annual, from 2011-12

Formerly Estimates of Personal Income for Small Areas, Personal Income in Australia (PIIA) provides a comprehensive range of income indicators across small geographic areas. PIIA is now based on the LEED, ensuring better consistency with Jobs in Australia.

[Tablebuilder: Jobs in Australia \(/statistics/microdata-tablebuilder/available-microdata-tablebuilder/jobs-australia\)](/statistics/microdata-tablebuilder/available-microdata-tablebuilder/jobs-australia)

Frequency: Annual, from 2011-12

Release of Jobs in Australia data through TableBuilder. This enables users to build their own customised tables from the Linked Employer-Employee Dataset microdata, including for State and Commonwealth Electoral Divisions.

Single Touch Payroll (STP)

The Australian Taxation Office (ATO) receives payroll information from employers through Single Touch Payroll (STP) enabled payroll and accounting software each time the employer runs its payroll. The ATO provides selected employer and job level data items from the STP system to the ABS for the production of official statistics. STP replaces the need for businesses to provide a payment summary annual report or 'group certificates.'

STP data is used to produce near real-time weekly indexes of payroll jobs and wages, including weekly changes in the number of payroll jobs, changes in wages and average weekly wages by jobs at the national, state and territory and ANZSIC industry level by selected personal characteristics, including sex and age group.

Scope and coverage

The scope and coverage of these estimates are largely defined and constrained by the characteristics of the data sources from which these estimates are produced. As such, users should note that not all jobs and wages in the Australian labour market are captured within these estimates.

Payroll jobs

Payroll jobs as reported to the ATO through STP are in scope of these estimates. All payroll jobholders regardless of age or Australian residency status are included. Persons reported via STP must hold either a Tax File Number (TFN) or an Australian Business Number (ABN).

A payroll job is a relationship between an employee and their employing enterprise, where the employee is paid in the reference week through STP-enabled payroll or accounting software and reported to the ATO. Where an employee is paid other than weekly, the established payment pattern is used to include payroll jobs paid in weeks outside the reference week.

Payroll jobs reported via STP exclude owner managers of unincorporated enterprises (OMUEs), which are more prevalent in the Construction and Agriculture, forestry and fishing industries.

Employers with 20 or more employees (large employers) commenced transition to STP reporting on 1 July 2018. Employers with less than 20 employees (small employers) began transitioning to STP on 1 July 2019. Any reporting concessions that were made available for small employers ended on 30 June 2021. At the time of this release, almost all large employers and eligible small employers are reporting through STP.

In addition, payroll jobs reported in the Defence Industry (ANZSIC Class 7600) are excluded from these estimates by the ABS to better align with other Labour estimates.

Wages

The STP reported wages associated with each payroll job are in scope of these estimates. Wages are gross amounts, prior to taxation and deductions and include:

- salary payments and allowances,
- labour hire payments and foreign income,
- the value of payments in kind (where a fringe benefit amount is recorded),
- bonuses where they are reported in the same field as normal payments.

The total wages concept broadly aligns with the Australian System of National Accounts (ASNA) definition of wages and salaries, with the exception of payments to employee's superannuation and severance and termination payments which are excluded.

More specifically, the following STP reported income items are included in the production of wages estimates;

- gross income amount (including bonuses),
- allowance income,
- fringe benefit amount (reportable, taxable),

- fringe benefit amount (reportable, tax exempt),
- other income (not specified),
- foreign income amount including tax exempt income,
- Community Development Employment Project income.

Other data sources

The STP data are enhanced through combining other administrative data held by the ABS (also sourced from the Australian taxation system).

Sex, age and residential geography variables are primarily sourced from Client Register data (supplied by ATO to the ABS as part of the transfer of Personal Income Tax data). Sex can only be sourced from Client Register data. When age and residential geography are not available from Client Register data, they are sourced from STP data. The ABS receives annual snapshots of de-identified Client Register data from the ATO, for use in the production of statistics.

Industry of activity, sector and employment size variables of the employing business are sourced from the ABS Business Register (ABSBR).

STP outputs

STP data are compiled into weekly indexes of payroll jobs and wages. These are published in [Weekly Payroll jobs and Wages in Australia \(/statistics/labour/earnings-and-work-hours/weekly-payroll-jobs-and-wages-australia/latest-release\)](#) on a monthly basis.

Each release contains both payroll jobs and total wages indexes and percentage change movements. Estimates are available at the national, state and territory and Australian and New Zealand Standard Industry Classification (ANZSIC) division by selected jobholder and employer attributes. Australian Statistical Geography Standard sub-state regions (Statistical Area 4, Statistical Area 3 and Greater Capital City Statistical Area) and ANZSIC subdivision estimates are also updated in each release.

Levels for jobs and wages are not available for release at this time. The payroll jobs index provides a measure of changes in jobs over time since the week ending 14 March 2020. Information on levels for jobs are best sourced from estimates of filled jobs from Labour Account Australia and estimates of employed persons from Labour Force, Australia. More information on the relationship between payroll jobs and LFS employment is included in the [Weekly Payroll Jobs and Wages methodology page \(/methodologies/weekly-payroll-jobs-and-wages-australia-methodology/week-ending-15-january-2022#differences-to-labour-force-employment-statistics\)](#).

The data underlying these estimates are revised in each release and reflected in percentage change movements and indexes.

The estimates are presented as an original series only. Seasonally adjusted and trend estimates are not yet available. A number of years of data will be required before seasonal patterns can be observed and adjusted for.

Australian Labour Account

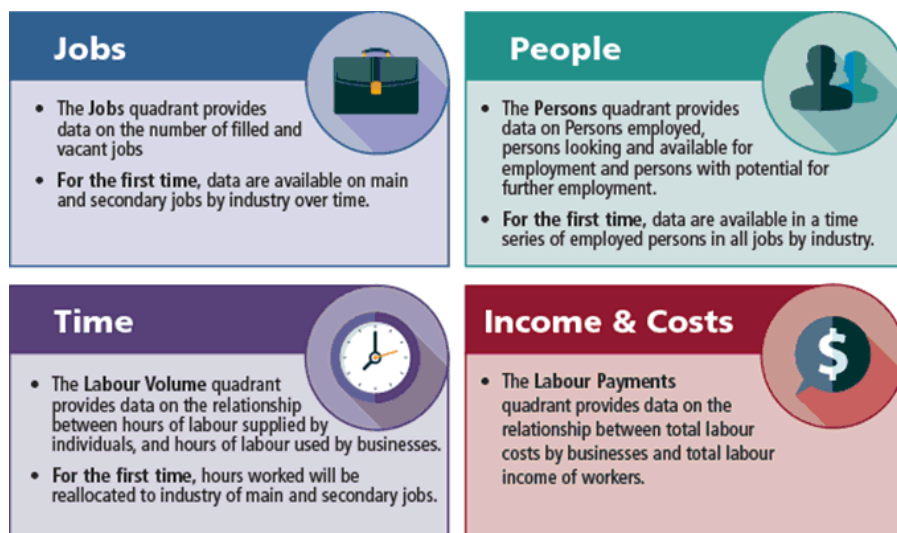
The Australian Labour Account provides a conceptual framework for integrating data from a number of sources including household survey, business survey and administrative data to produce a coherent and internally consistent set of aggregate estimates of key labour market variables, which more effectively enable the description and analysis of the state and dynamics of the Australian labour market. These core variables can help users make sense of seemingly inconsistent labour related data, which are often based on different reference periods, populations, concepts, definitions and methodologies.

The Australian Labour Account is macro-economic in scope, building on the International Labour Organisation fundamentals and expanding them to ensure consistency with the Australian System of National Accounts. It aims to extend the analytical capacity of national accounts data by providing a labour-specific lens. The Australian Labour Account framework has been designed to conceptually align with the System of National Accounts production boundary (see Institutional Units and the Economically Active Population). This ensures direct compatibility with National Accounts and productivity estimates, as well as providing a mechanism for bringing together conceptually related aggregate data from business, household and administrative sources.

The Labour Account provides a time series of estimates of the number of employed persons, the number of jobs, hours worked and the income earned for each industry in one coherent framework. Historically, published estimates of employed persons in each industry have only been available for industry of main job. The expanded scope and additional data sources used in the Labour Account include data for multiple job holders by their industry of second, third and fourth job. The Australian Labour Account is published on a quarterly basis in [Labour Account Australia \(/statistics/labour/employment-and-unemployment/labour-account-australia/latest-release\)](#).

The Australian Labour Account framework incorporates four quadrants: Jobs, Persons, Labour Volume and Labour Payments.

Australian Labour Account quadrants



The four quadrants of Labour Account made up Jobs; Persons; Labour (volume) and Payment. The jobs quadrant provides data on numbers of filled jobs, vacant jobs and total number of jobs in the economy. The persons quadrant provides data on numbers of employed persons, together with data on numbers of unemployed and underemployed persons. The labour volume quadrant provides data on the relationship between hours of labour supplied by individuals, and hours of labour used by businesses. Lastly, the labour payments quadrant provides data on the relationship between total labour costs by businesses and total labour income by workers.

International context

There are currently no international standards regarding the production of a labour account, however a four step process has been documented by the ILO and was followed (to varying degrees) by the National Statistical Organisations in Denmark, the Netherlands and Switzerland in compiling their own labour accounts. The ILO process has been used as a guide in compiling the Australian Labour Account. For further information on the four step process, refer to [Labour Accounts: A Step Forward to a Coherent and Timely Description of the Labour Market](https://www.ilo.org/global/statistics-and-databases/WCMS_087916/lang--en/index.htm) (https://www.ilo.org/global/statistics-and-databases/WCMS_087916/lang--en/index.htm).

The ILO describes two approaches to compiling a labour account: a cross-sectional approach involving confrontation and reconciliation of key labour market measures, and a longitudinal approach which incorporates changes to population and labour force via births, deaths, and net migration, and includes measures such as duration of employment. The Australian Labour Account focuses on the cross-sectional approach (since this is the approach that supports data confrontation and reconciliation), and also provides a time-series dimension.

The ILO lists six central elements in labour statistics:

- employed persons and jobs;
- unemployed and underemployed persons;
- job vacancies;
- hours of work and full-time equivalents;
- income from employment and labour costs; and
- organisation of the labour market (i.e. statistics on collective labour agreements, industrial disputes and trade-union memberships).

No country has yet compiled a labour account that measures all of these elements. The Australian Labour Account covers most elements listed in the ILO approach, with the exception of data on full-time equivalents and statistics on labour market organisation. The Australian Labour Account also includes measures of underutilised labour (an estimate of the hours of work sought by the unemployed, plus additional hours preferred by the underemployed).

The Australian Labour Account, in particular the quarterly information disaggregated by industry division, provides an opportunity to significantly improve the quality of aggregates such as the number of jobs occupied and total number of persons employed within each industry, measures of hours worked, and changes in labour productivity.

Uses of the Labour Account

The Australian Labour Account is an enhancement to the broader set of Australia's National Accounts. It aims to provide a set of labour related statistics on employed persons, filled jobs, hours and payments that is consistent with the concepts, definitions and scope of the Australian National Accounts.

Australian Labour Account data are likely to be of most value to people engaged in the use of labour statistics in macro-economic analysis, forecasting and in policy related research. They should also assist economic journalists and public commentators in informing public understanding of labour statistics.

The Australian Labour Account should be used for industry analysis of labour growth and performance in terms of people, jobs, hours, labour costs and income. For example, Labour Force Survey data for employed persons by industry has historically only been available for

industry of main job. The expanded scope and additional data sources of the Australian Labour Account includes data for the total number of all secondary jobs (including second, third and fourth job etc.), allocated to industry of main and secondary job. This allows for an industry perspective of the number of people employed in each industry in a time series. These data can be used by researchers and policy makers to better model how the number of people employed could be impacted by shocks to industry or changes to policy.

The Australian Labour Account is a complement to the existing suite of labour statistics. Users should continue to use the Labour Force, Australia for headline employment, unemployment and persons not in the labour force estimates, as this is the data suite that is internationally comparable and aligned with International Labour Organisation (ILO) conventions.

Macro-economic analysis

The Australian Labour Account draws on the macro-economic framework and statistical techniques used in the Australian National Accounts to help address the inconsistencies, scope gaps, frequency and timeliness shortcomings of labour data drawn from a variety of business and household surveys and other administrative sources.

The Australian Labour Account tables are designed for use in macro-economic analysis. They provide annual and quarterly data on a similar timetable and at a similar level of industry detail as the national accounts.

An important use the Australian Labour Account is expected to be in the analysis of productivity, where the Australian Labour Account will provide data on hours worked at an industry level that is more coherent with industry output than data currently available from the household Labour Force Survey.

The Australian Labour Account should assist users in understanding the employment implications, at a macro-economic scale, of developments such as globalisation, new technologies, growth of services and the changing pattern of global demand for resources.

The Australian Labour Account will also help users understand the economic contribution of groups who fall outside the scope of official Labour Force Survey statistics, particularly the role of short-term working visa holders.

Micro-economic analysis

The Australian Labour Account tables do not incorporate detailed data on employment by age, gender, income, earnings, employment arrangements, union membership, occupation, educational qualifications or region.

If users require detailed dynamics essential for analysis of individual or household characteristics, they should continue to rely on the Census, household and business surveys, and on exploiting the potential of tax and other administrative transaction records. The Australian Labour Account nevertheless provides a macro-economic context within which to understand and interpret micro-economic labour data.

International comparisons

To enable the international comparison of labour statistics, especially data on employment and un-employment, Australia (along with most countries) follows guidelines and standards established by the ILO. Australia's official labour force data, derived from the household Labour Force Survey, remains the source of internationally comparable statistics on the labour force, employment and unemployment.

Due to practical difficulties in consistently measuring work undertaken by certain population groups, particularly children, transient workers and defence force personnel, ILO standards exclude these groups, despite the fact their labour activities contribute to national production. The Australian Labour Account shows that persons excluded from the scope of official Labour Force Survey statistics account for about 5% of all persons employed in production in Australia. The Australian Labour Account, based on 2008 System of National Accounts (2008 SNA) standards, should assist in making more reliable and transparent comparison of productivity statistics and other data that relate labour inputs to production, earnings and expenditure.

Limitations to be aware of in the use of the Labour Account are described below.

Conceptual limitations

The purpose of the Australian Labour Account is to support macro-economic analysis requiring data on the participation of the population in paid employment and related economic production. In addition, the Australian Labour Account is designed to be consistent in concept and scope with the Australian System of National Accounts (ASNA). For this reason, work which falls outside the ASNA definition of economic activity such as cleaning, cooking and child care produced and consumed within households, and voluntary work undertaken outside institutional settings such as coaching children's sports teams, are excluded from the scope of the Australian Labour Account. Estimates of numbers of persons engaged, and hours spent, in unpaid work are available from other sources, e.g. How Australians Use Their Time, 2006.

Content limitations

The macro-economic emphasis is again reflected in the level of disaggregation of Australian Labour Account data. The focus is on the

national economy, with data disaggregated by industry at the Australian and New Zealand Standard Industrial Classification (ANZSIC) division and subdivision levels. Data are available both quarterly and annually, with quarterly data published in close succession to the Australian National Accounts. The development of a state level component, in line with the state component of the Australian National Accounts, would be a potential further extension of the Australian Labour Account.

Scope limitations

Some types of activity conceptually falling within the scope of the Australian Labour Account may be excluded from, or not well measured in, the available data sources. These are summarised below.

Scope limitations impacting both household and business estimates include:

- jobs associated with illegal or hidden activities (the non-observed economy) are likely to be under-reported in both business and household surveys;
- positions that are voluntary, with no remuneration at all, not even in kind, but working within a recognised institutional unit, are outside the scope of both business and household collections;
- non-salaried directors are not included in business or household sources;
- child workers under the age of five are outside the scope of business collections (those who are self-employed or contributing family workers) and household collections (all employed children under five); and
- there is no good source of data on jobs that are filled by two or more people under a job sharing arrangement. On both the business and the household sides, a position that is filled by a job sharing arrangement would be counted as multiple filled jobs, not a single job held by multiple employed persons.

Scope limitations impacting household side estimates include:

- data on hours worked are calculated for a particular reference week each month, and are assumed to be representative of weeks for which data are not collected;
- industry estimates for the unemployed population are based on industry of last job worked (within the past two years) from the Labour Force Survey, and do not necessarily equate to the industries in which the unemployed are currently seeking work, nor do they include those unemployed persons who have never held a job previously;
- no adjustments have been made to align the Labour Force Survey unemployed persons or hours sought with the 2008 SNA residency and production boundaries, as there is no reliable information to derive estimates of additional hours of work sought by short term working visa holders. It is also assumed that defence force personnel and child workers are fully employed. The Labour Account should not be used to derive proportional measures such as an unemployment rate or participation rate, as the numerator and denominator are not strictly comparable;
- illegal non-resident job holders: the estimated number of short term (less than 12 months) visitors to Australia who work for Australian resident enterprises is based on numbers of working visa holders. No estimate is made for those working without an appropriate visa; and
- Australian residents living in Australia employed by overseas resident enterprises: an estimate of the number of jobs filled by these people has been deducted from household side estimates, based on data supplied by the Department of Home Affairs. This estimate only represents persons working in diplomatic or consular related jobs.

Scope limitations impacting business side estimates include:

- domestic staff employed by private households are outside the scope of business surveys used in compiling business sources estimates of filled jobs, but would be in scope of the Labour Force Survey;
- jobs held by self-employed persons operating their business without a registered ABN fall outside the scope of business surveys, but would be in scope of household surveys;
- employees on workers' compensation who are not paid through the payroll are not included in business side sources;
- estimates for employment subsidies in the Labour Payments quadrant are based on Commonwealth data sourced from the Department of Finance. No adjustment has been made for employment subsidies paid under State or Local government schemes. Employment subsidies can be difficult to classify, particularly state or local government schemes for which information is often limited;
- no adjustments have been made to labour payments for unpaid employed persons (both adult and child workers) working on a farm or in a family business (contributing family workers). It is likely that these employed persons are paid in-kind, but this is impossible to estimate with any degree of confidence;
- no adjustment has been made for payments made to child workers under self-employment arrangements in the Labour Payments quadrant. It is possible that self-employed child workers are not being captured in labour payment estimates, as they are likely to not have an ABN and therefore be out of scope of ABS business surveys. One of the most common occupations from the 2006 Child Employment Survey was Leaflet or Newspaper Deliverer. It is likely that an employed child delivering leaflets would be treated as an independent contractor by their employer, and not an employee. In this situation, if the employed child does not have an ABN, they are unable to be selected for ABS business surveys.
- job vacancies data does not include vacancies available in the non-observed economy (jobs associated with illegal or hidden activities), private households employing staff, foreign embassies and consulates, and Australian permanent defence forces.
- the National Skills Commission Internet Vacancy Index, used to supplement ABS Job Vacancy Survey data for the Agriculture, Forestry and Fishing Division, only includes job advertisements listed on the internet. Job advertisements listed only in newspapers, on notice boards and other mediums (other than the internet) are not included;
- there is no known data source relating to hours worked but not paid, or hours paid but not worked; and
- the survey of Employee Earnings and Hours, which is used as a source for calculating hours paid, excludes employees in certain industries and in certain employment categories (e.g. employees on leave without pay, on strike, or casuals not rostered to work during the survey reference period, managerial employees where there is no link between pay and hours worked, and employees on workers' compensation).

compensation who are not paid through the payroll).

Other limitations

Timeliness:

- Annual industry statistics compiled from the annual EAS are not available at the time required for compiling the latest annual Australian Labour Account estimates, requiring the extrapolation of Labour Account filled jobs (and related) data for up to seven quarters.
- There is a time lag between the current reference period and the release of data in Government Finance Statistics, Australia. Therefore, data for employment subsidies in the Australian Labour Account are extrapolated forward based on the movement of previous data.

Data availability:

- Data on numbers of child workers has not been collected since 2006. In modelling current estimates of numbers of child workers, assumptions are made about the proportion of children working, the industries in which they work and their propensity to hold secondary jobs.
- Data are not available for earlier parts of some series of the Australian Labour Account, and missing data have been estimated through applying movements or proportional distribution from a conceptually related series to observed Australian Labour Account data. Data estimated in this way should not be considered to be as statistically robust as data based on observed and comparable survey estimates.

Accuracy

- As noted in the discussion of Balanced Tables, there are several sources of statistical error in source data which are reflected in internal discrepancies within the Australian Labour Account, most notably between household and business side estimates of numbers of filled jobs.

Methodological limitations

- Methods used in compiling Australian Labour Account statistics are constrained by the robustness of their assumptions. Assumptions made in the Australian Labour Account include:

Jobs quadrant:

- quarterly estimates of private sector business sources filled jobs assume that movement in numbers of jobs reported are indicative of changes in benchmarked employment numbers reported in Australian Industry;
- that short term student visa holders have similar levels of employment to other resident students aged 15-24 years;
- that short term visa holders other than students and sponsored visa holders have similar levels of employment to the broader resident population;
- that permanent defence force personnel and employed children under 15 years do not hold secondary jobs; and
- that average proportions of multiple job holders with second, third and fourth jobs apply to time periods prior to 2014. While data collected prior to 2014 can identify whether an employed person is a multiple job holder, numbers of secondary jobs were not collected from the LFS prior to 2014.

Labour Volume quadrant:

- that derived weekly averages sourced from the Survey of Employee Earnings and Hours (used in computing hours paid for) are equally applicable to employees who are not covered by the survey, including:
- employees on leave without pay, on strike, or casuals not rostered to work during the survey reference period;
- persons engaged in the Agriculture, Forestry and Fishing industry;
- employees on workers' compensation who are not paid through the payroll; and
- members of the Australian permanent defence forces.

Labour Account framework

The Australian Labour Account framework has been designed to conceptually align with the accounting conventions of the United Nations System of National Accounts (2008 SNA), as applied in the Australian System of National Accounts (ASNA). In particular, the Australian Labour Account aligns with production and residency boundaries of the ASNA. This ensures direct compatibility with national accounts and productivity estimates, as well as providing a mechanism for bringing together conceptually related aggregate data from business, household and administrative sources. The scope of the Australian Labour Account is consistent with that of the national economy, as defined in the Australian System of National Accounts (ASNA), which follows the international standard set out in the United Nations System of National Accounts.

The Labour Account consists of four quadrants: Jobs; Persons; Labour Volume and Labour Payments.

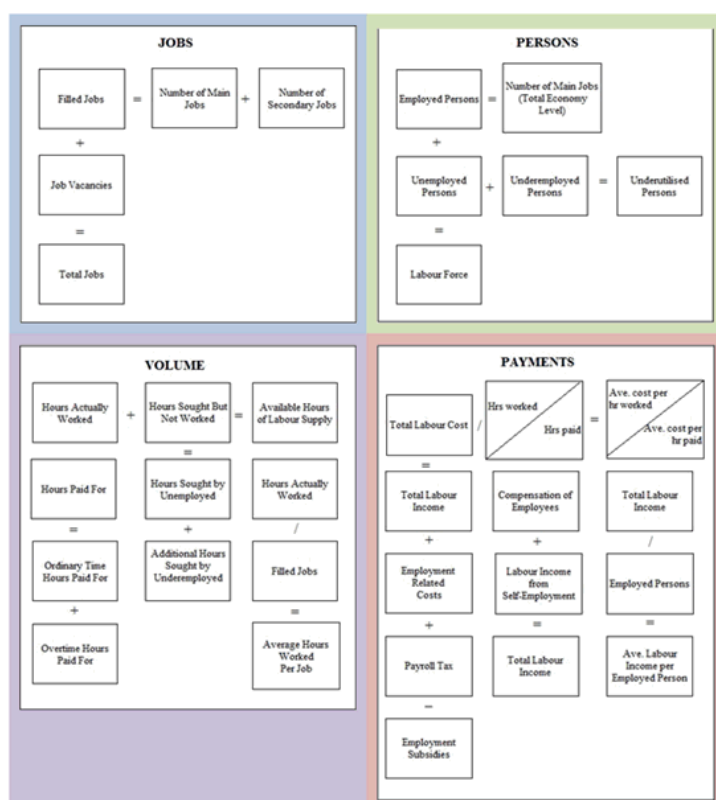
- The Jobs Quadrant provides data on numbers of filled jobs derived separately from business and household sources, plus data on vacant jobs to provide a total number of jobs in the economy.

- The Persons Quadrant includes data on numbers of employed persons, together with data on numbers of unemployed and underemployed persons (derived from household sources).
- The Labour Volume Quadrant provides data on hours paid for (derived from business sources) and hours worked (from household sources), plus data on additional hours of work sought by unemployed and underemployed persons (from household sources).
- The Labour Payments Quadrant provides data on labour income and employment costs (from business sources).

The Labour Account combines data from the persons, jobs, labour volume and labour payments tables to calculate average hours worked, average remuneration (per person and per job), and average labour cost per hour worked.

The four quadrants are linked by a set of identity relationships, which the aggregate statistics must satisfy. These identities are shown below. The identities used in the Australian Labour Account are consistent with the identities used in other countries. Some relationships are direct, such as employed persons in the total economy is equal to the number of main jobs, while other relationships are considered indirect or derived, such that the relationship is based on an average or ratio measure such as average hours worked per job, or average labour income per employed person.

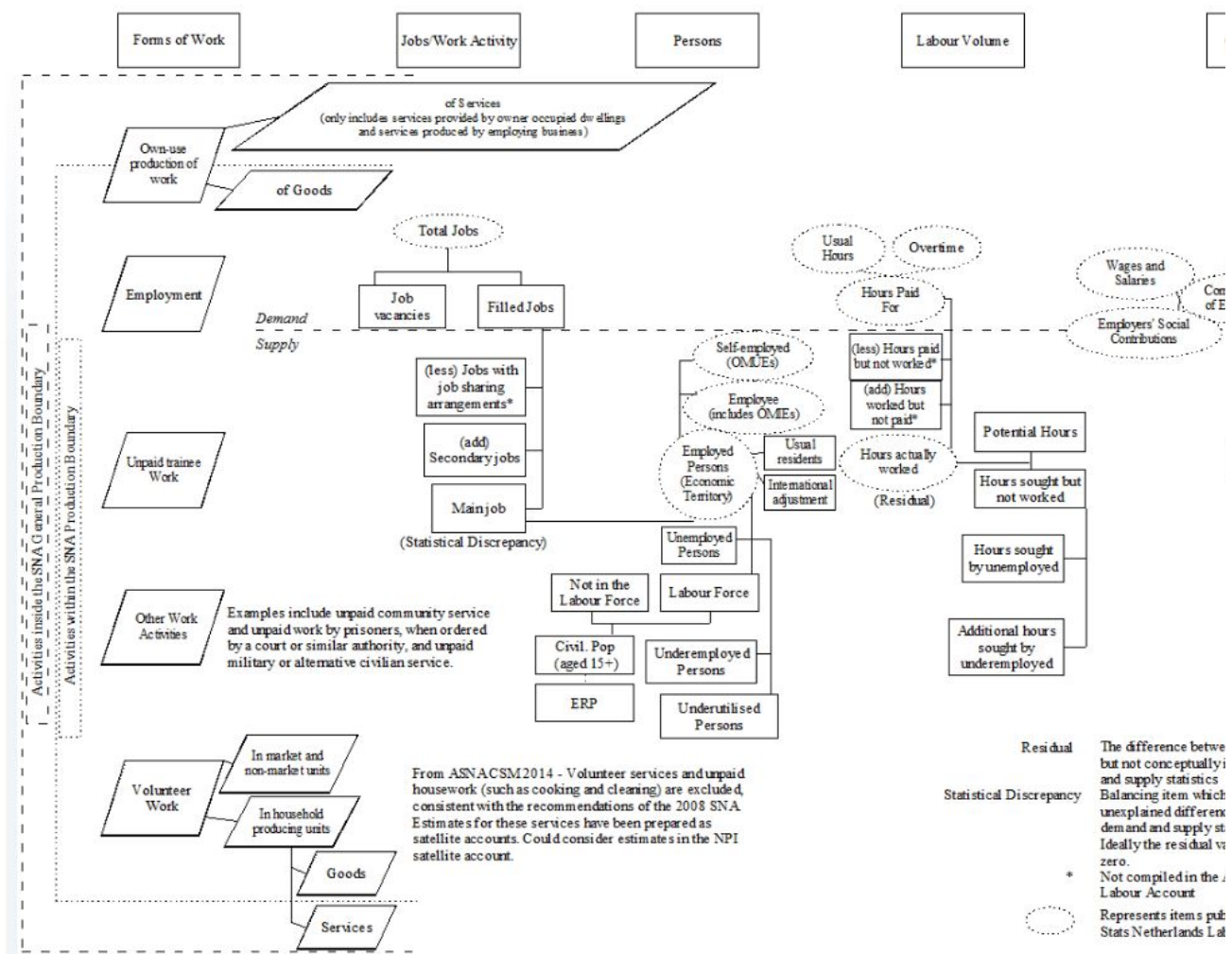
Identity relationship diagram



The Labour Account identity relationship diagram displays the four quadrants (jobs, persons, volume and payments) and identifies the relationships between each of these quadrants. These four quadrants are linked by a set of identity relationships which is represented in this identity relationship diagram. Some relationships are direct, such as employed persons in the total economy is equal to the number of main jobs, while other relationships are considered indirect or derived, such as average labour income per employed persons.

Conceptual framework

Labour Account conceptual framework



Labour Account concepts

The supply of labour relates to the quantum of labour services offered by people (i.e. the number of hours actually worked by employed persons, plus the number of additional hours being sought by those who are either unemployed or underemployed). Household surveys are the primary source of data on the supply of labour, supplemented by related administrative data.

Labour demand relates to the quantum of labour services sought by companies and other institutional units engaged in economic activity, within the scope of the 2008 SNA production boundary. It includes the numbers of hours actually paid for in filled jobs, plus the unmet labour demand by employing units measured through vacant jobs. Surveys of businesses, government and not-for-profit institutions and relevant administrative data sets are the main sources of information on labour demand.

Production boundary

Accounts compilation uses some important boundaries to define the scope and treatment of events that occur within the economy. These boundaries are:

- the production boundary defining the scope of productive economic activity; the asset boundary distinguishing transactions in assets from income and expenditure; and
- the boundary between current and capital transfers (IMF, 2007, The system of macroeconomic accounts statistics: an overview, Pamphlet series no. 56).

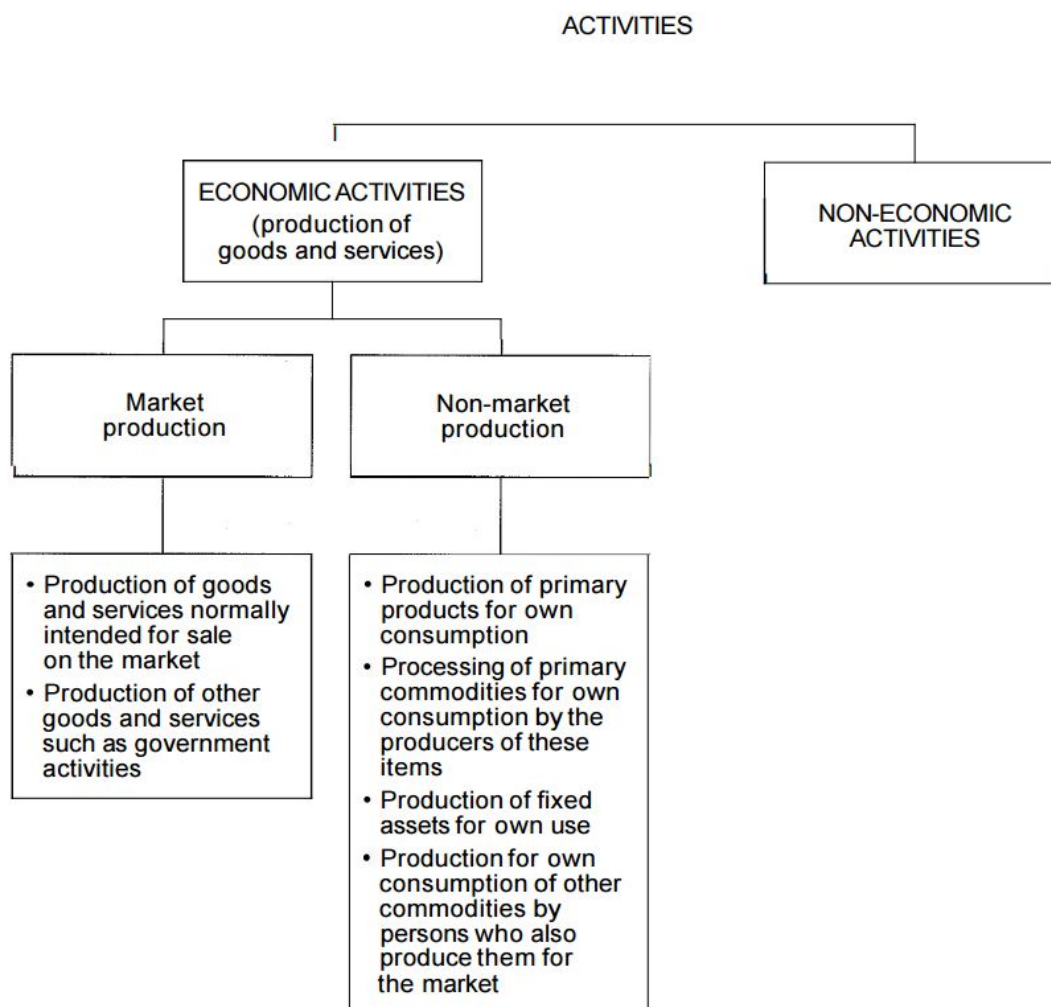
The definition of the production boundary used in the Australian Labour Account determines the scope of activities covered, and the size of the economy measured in the account.

The Australian Labour Account includes all persons employed in economic activity as defined by the 2008 SNA. Economic activity is the production of goods and services falling within the 2008 SNA production boundary by institutional units resident in the Australian Economic Territory. In the 2008 SNA, production is viewed as a physical process in which labour and assets (capital) are used to transform inputs of energy, materials and services into outputs of other goods and services.

In its simplest form, economic activity is the production of goods and services, and in the 2008 SNA is always a result of production (ASNA, 2.8).

Economic activity covers all market production and certain types of non-market production, including the production and processing of primary produce by households for their own consumption (e.g. vegetable gardens, fruit trees or eggs from chickens), the construction of dwellings and structures for own use, the production of fixed assets for own use and the production of dwelling services from owner occupied homes.

Scope – economic activity in terms of 2008 SNA concept of goods and services production



The diagram shows there are economic activities (i.e. related to the production of goods and services) and non-economic activities. Economic activities are either market production or non-market production. Market production is the production of goods and services normally intended for sale on the market; and production of other goods and services such as government activities. Non-market production is the production of primary products for own consumption; processing of primary commodities for own consumption by the producers of these items; production of fixed assets for own use; and production for own consumption of other commodities by persons who also produce them for the market.

While the 2008 SNA definition of the production of goods and services covers a wide range of activities, many other activities still remain outside its scope. For example, the production of domestic and personal services for consumption within the same household (such as preparing meals and caring for children) is excluded. The production of most domestic and personal services is excluded, as the decision to consume these services within the household is made even before the service is provided, and because of the adverse effects their inclusion would have on the usefulness of the accounts for policy purposes and analysis of inflation and unemployment. The extension of the production boundary to include own account household services would result in virtually the whole adult population being defined as 'economically active', unemployment under the existing International Labour Organisation (ILO) definition would cease to exist, and employment statistics would become meaningless (2008 SNA, 1.42, 6.31; ASNA, 8.3).

One exception is the production of dwelling services from owner occupied housing. This is a pragmatic compromise required to allow comparison of economic activity between countries with significant differences in rates of home ownership. However, no labour input is

associated with this activity.

Unpaid work and volunteer services

A distinction can be made between those who have an agreement to provide labour for token remuneration or income in kind, those for whom there is explicitly no remuneration, and those where there is apparently no remuneration but the workers benefit directly from the output to which they contribute. In ILO statistics, all three types of worker are included in the economically active population as employees.

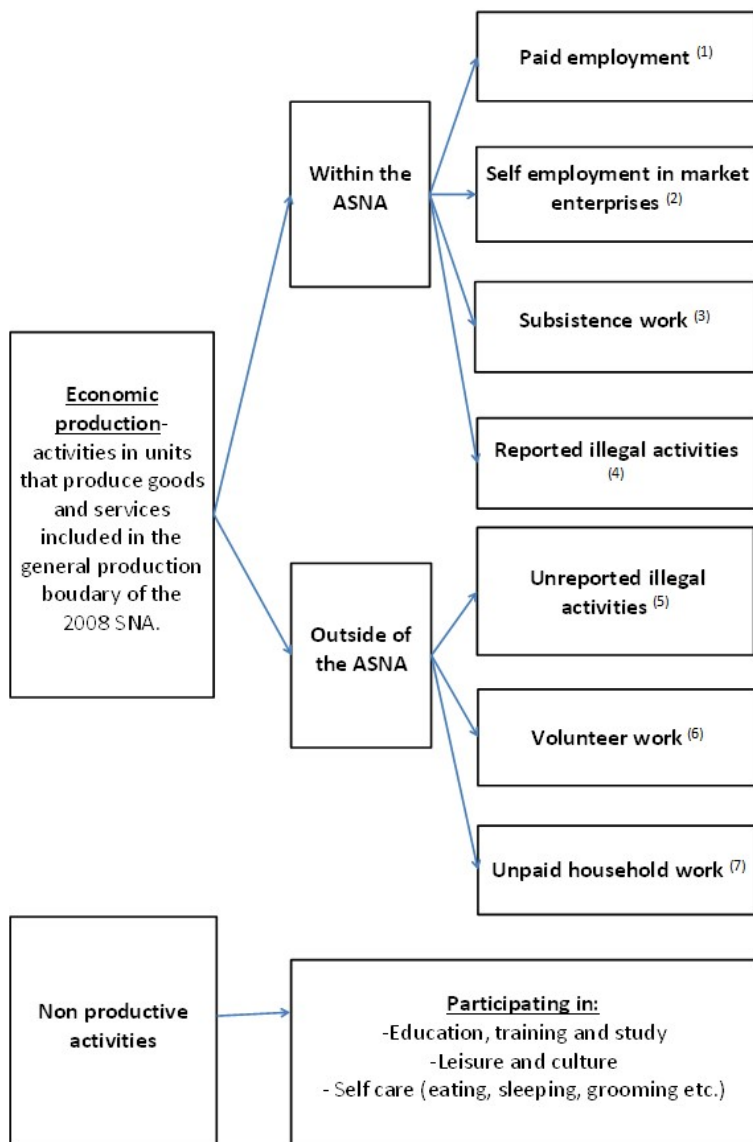
In the 2008 SNA, the remuneration of those working for token amounts or only income in kind is measured by these costs. No imputation for an additional element of remuneration is included. For example, if doctors or teachers work for only food and lodging, the value of this as income in kind is the only remuneration imputed to them. Such instances may arise in religious institutions, or in the wake of natural disasters. If the unit employing these staff is responsible for whatever little remuneration is received, these people are classed as employees and included in the scope of the Australian Labour Account.

If staff are purely voluntary, with no remuneration at all, not even in kind, but are working in a recognised institutional unit (business, government agency, not-for-profit organisation) engaged in economic activity, then these individuals are still regarded as being employed in 2008 SNA terms. As they are not paid, there is no related compensation of employees recorded for them. Individuals providing services to groups of other individuals, such as coaching a children's sports team, without any associated infrastructure, are not regarded as employed but rather engaging in a leisure pursuit (2008 SNA, 19.37 - 19.39).

Although they fall within scope of the 2008 SNA, the Australian Labour Account does not include estimates of numbers of persons engaged by institutional units on a purely voluntary basis. This is consistent with the current treatment in the ASNA, which unlike the 2008 SNA does not allow for the measurement of voluntary contributions of labour.

If family members contribute to the output of an unincorporated enterprise, the estimate of mixed income is assumed to include an element of remuneration for them, and thus they are all treated as being in the economically active population from a 2008 SNA point of view (2008 SNA, 19.40). The Australian Labour Account includes estimates for contributing family members, consistent with the 2008 SNA.

In scope activities with the ASNA



The diagram describes economic production and non-productive activities. Economic production is the activities in units that produce goods and services included in the general production boundary of the System of National Accounts. These are further categorised according to whether they are within scope of the Australian System of National Accounts (ASNA). Activities within scope of the ASNA are: paid employment; self employment in market enterprises; subsistence work; and reported illegal activities. Activities outside of the scope of the ASNA (but within the general production boundary) are: unreported illegal activities; volunteer work; and unpaid household work. Non-productive activities include participating in: education, training and study; leisure and culture; and self care (eating, sleeping, grooming etc.).

Treatment of illegal activities

The 2008 SNA treats illegal actions that conform to the characteristics of transactions (notably the characteristic that there is mutual agreement between the parties) in the same way as legal actions. Thus, although the production or consumption of certain goods such as narcotics may be illegal, market transactions in such goods should, in principle, be recorded in the national accounts.

As such, the work done by people working illegally on a farm (i.e. visa holders working in breach of visa conditions), working in the construction industry without a permit, selling merchandise without a licence, or working 'cash-in-hand' for tax evasion purposes or for fear of being reported to immigration officials, falls within the scope of economic activity.

However, many illegal actions are crimes against persons or property that cannot be construed as transactions. For example, theft is not an action into which two units enter by mutual agreement. Conceptually, theft or violence is an extreme form of externality in which damage is inflicted on a household or another institutional unit deliberately, and not merely accidentally or casually. Thus, thefts of goods from households, for example, are not treated as transactions and estimated values are not recorded for them under household expenditures (2008 SNA 3.97; ASNA 3.22-3.23).

Due to reluctance in reporting illegal activity on the part of those engaged, it is likely that employment related costs, remuneration, employment, jobs and hours worked related to these activities are under-reported in both business and household surveys and administrative records used in compiling both Australian National Accounts and Australian Labour Account statistics.

Although some illegal activity is within the 2008 SNA production boundary and may be reported to some extent by businesses, Australia does not specifically adjust for employment relating to illegal activity in the ASNA. Similarly, illegal activity is not adjusted for in the Australian Labour Account.

Scope of the population

Economically active population

The Australian Labour Account contains information about the economically active population who provide labour for economic production. The economically active population is defined as all persons who, during a specified time, contribute to or are available to contribute to the production of economic goods and services as defined by the 2008 SNA.

Population age

The scope of the population in the Australian Labour Account includes all persons who contribute to Australian economic activity, irrespective of age. This scope is consistent with the 2008 SNA.

The ILO standards and guidelines defining the labour force recognise the need to exclude persons below a certain age from the measures, without specifying a particular age limit. The responsibility for setting such limits lies with individual countries. Examples of factors influencing the age limit are:

- legislation governing the minimum school leaving age;
- labour laws setting the minimum age for entering paid employment;
- the extent of the contribution to economic activity by young people; and
- the cost and feasibility of accurately measuring this contribution in household surveys.

A maximum age limit is not a feature of the international guidelines but, for practical reasons, some countries do use a maximum age limit. The international guidelines also recognise the possible need, in the survey context, to exclude other population groups such as persons living permanently or semi-permanently in institutions.

Australia has adopted an age definition of 15 years and over in the Labour Force Survey, as is allowed within ILO standards and guidelines. Australian labour and compulsory schooling legislation have resulted in low numbers of young persons below this age being involved in economic activity. While such legislation varies from state to state, the net result is that age 15 is the lowest practical limit at which it is feasible and cost-effective to measure the participation of young people in economic activity with acceptable accuracy in a household based collection (i.e. the Labour Force Survey).

Employment data collected in ABS surveys of businesses relate to all persons employed in economic activity falling within the scope of the survey, regardless of age.

Scope differences in ABS surveys are adjusted for in the Australian Labour Account.

Australian Defence Forces

The Australian Labour Account includes permanent members of the Australian Defence Forces (ADF). This is consistent with the scope of the 2008 SNA.

The ILO international standards require that members of the armed forces be classified as employed and recommends that, for analytical purposes, the economically active population be divided into two parts: the armed forces and the economically active civilian population. The guidelines recognise that there may be difficulties in obtaining information about membership in the armed forces from labour force surveys, and that separate use of administrative counts may be necessary.

As a result of these recognised difficulties in obtaining data, Australia excludes permanent members of the armed forces from the Labour Force Survey and the related labour force estimates. Similarly, ANZSIC Class 7600 (Defence) is out of scope of relevant business surveys. Data on Australian defence force members are included in the Australian Labour Account to adjust for differences in scope between survey data and the ASNA.

Australian Defence Forces Reservists

ADF reservists are included in the current collection of the Labour Force Survey, and in the Australian Labour Account. Reservist jobs are considered as secondary jobs, should the reservist have a main job elsewhere.

Non-private dwellings

While some household surveys exclude all persons living in non-private dwellings, these persons are included in the Labour Force Survey and therefore in the Australian Labour Account.

Persons living in non-private dwellings include persons living in correctional and penal institutions, dormitories of schools and universities, religious institutions, hospitals, boarding houses, hotels and motels and so on. The exclusion of the institutional population in some household surveys is largely due to practical considerations of sampling.

Institutional units and sectors

The 2008 SNA defines an institutional unit as an economic entity that is capable, in its own right, of owning assets, incurring liabilities and engaging in economic activities and in transactions with other entities (2008 SNA, 4.2; ASNA, 4.3). There are two types of institutional units: Households and Legal or Social Entities (ASNA 4.6).

Households

A household is defined as a group of persons who share the same living accommodation, who pool some or all of their income and wealth, and who consume certain types of goods and services collectively, mainly housing and food (2008 SNA, 4.4; ANSA, 4.7).

Households are providers of labour services.

Legal or social entities

A legal or social entity is defined as one whose existence is recognised by law or society independently of the persons or entities that may own or control it (2008 SNA, 4.6; ASNA, 4.10). In the Australian system, the legal entity unit is closest to the 2008 SNA concept of the institutional unit. However, in the ASNA, the unit used is the enterprise, which can be a single legal entity or a group of related legal entities that belong to the same institutional subsector. Four main types of institutional units are recognised in the 2008 SNA and the ASNA: households, non-profit institutions, government units and corporations (including quasi-corporations) (ANSA, 2.3).

The ASNA recognises corporations (incorporated and unincorporated), co-operatives, non-profit institutions, quasi-corporations and unincorporated government units (departments and agencies) as types of legal or social entity.

An enterprise is a view of an institutional unit as a producer of goods and services. The term enterprise may refer to a corporation, a quasi-corporation, a non-profit institution or an unincorporated enterprise (2008 SNA, 5.1).

Most enterprises consist of individual legal or social entities, or in some instances combinations of unincorporated legal or social entities. A household can constitute an enterprise where it undertakes economic activity that falls within the 2008 SNA production boundary.

An enterprise can be further subdivided into component production units where it engages in distinctive types of productive activity (multiple industries), at separate locations, e.g. a manufacturing plant and a wholesale outlet (2008 SNA, 5.2).

By creating jobs, enterprises generate demand for labour services.

The ABS has implemented these principles in the ABS Economic Units Model, which is used to determine the productive structure of Australian institutional units (ASNA, 4.31). The model consists of:

- The Enterprise Group (EG) - essentially equivalent to the 2008 SNA enterprise concept (2008 SNA, 5.1). The group dimension recognises the reality that enterprises can consist of multiple legal or social entities under common control.
- Legal Entities (LEs) - approximate the 2008 SNA concept of legal and social entities, but is extended to include households engaged in productive economic activity.
- Type of Activity Units (TAUs) - incorporate the industry homogeneity element of the 2008 SNA establishment, recognising that distinct activities such as manufacturing and retailing can be co-located.
- Location Units - incorporate the location element of the 2008 SNA establishment.

The Enterprise Group (EG) is an institutional unit that covers all the operations within Australia's economic territory of legal entities under common control. Control is defined in Corporations legislation. Majority ownership is not required for control to be exercised.

The Legal Entity (LE) is an institutional unit covering all the operations in Australia of an entity which possesses some or all of the rights and obligations of individual persons or corporations, or which behaves as such in respect of those matters of concern for economic statistics. Examples of legal entities include companies, partnerships, trusts, sole (business) proprietorships, government departments and statutory authorities. Legal entities are institutional units. In most cases, the LE is equivalent to a single Australian Business Number (ABN) registration.

The Type of Activity Unit (TAU) comprises one or more legal entities, sub-entities or branches of a legal entity that can report productive and employment activities. Type of Activity Units are created if accounts sufficient to approximate Gross Value Added are available at the Australian and New Zealand Standard Industrial Classification (ANZSIC) subdivision level.

A Location is a producing unit comprised of a single, unbroken physical area from which an organisation is engaged in productive activity on a relatively permanent basis, or at which the organisation is undertaking capital expenditure with the intention of commencing productive activity on a relatively permanent basis at some time in the future.

Institutional sectors

The institutional sectors of the 2008 SNA group together similar kinds of institutional units. Corporations, non-profit institutions, government units and households are intrinsically different from each other in that their economic objectives, functions and behaviour are different. Likewise, institutional units are allocated to sector according to the nature of the economic activity they undertake (2008 SNA, 4.16-4.17). 2008 SNA defines the following institutional sectors:

1. Financial Corporations;
2. Non-financial Corporations;
3. General government;
4. Non-profit institutions serving households (NPISH);
5. Households; and
6. Rest of the World.

In the ASNA, the NPISH sector is combined with the household sector.

Industry

An industry consists of all establishments (in the Australian context, Type of Activity Units) in the economy engaged in the same, or similar, types of activity (2008 SNA, 5.2; ASNA, 2.10-2.14). Units in the same industry are generally characterised by common production functions, use of similar types of assets, intermediate inputs or the production of outputs sharing common characteristics (ASNA, 5.1). Typically, goods producing industries are distinguished from service producing industries; extractive industries (agriculture, forestry, fishing and mining) are distinguished from transformative industries (manufacturing and construction) and from distributive industries (transportation, wholesaling and retailing).

Type of Activity Units are classified to an industry using the Australian and New Zealand Standard Industrial Classification (ANZSIC, 2006 version), which is based on the current International Standard Industrial Classification (ISIC, revision 4).

In business surveys, data about jobs, both vacant and filled, hours paid for, labour costs and remuneration are collected at the Type of Activity Unit level, and are classified to the industry of the unit. This is also the unit level at which data are collected for compiling production (Gross Value Added) and generation of income accounts.

The Australian Labour Account provides data for each of the 19 industry divisions that represent the highest level of the ANZSIC and a subset of data for each of the 86 subdivisions. ANZSIC division codes and titles are:

A Agriculture, Forestry and Fishing
B Mining
C Manufacturing
D Electricity, Gas, Water and Waste Services
E Construction
F Wholesale Trade
G Retail Trade
H Accommodation and Food Services
I Transport, Postal and Warehousing
J Information Media and Telecommunications
K Financial and Insurance Services
L Rental, Hiring and Real Estate Services
M Professional, Scientific and Technical Services
N Administrative and Support Services
O Public Administration and Safety
P Education and Training
Q Health Care and Social Assistance
R Arts and Recreation Services
S Other Services

Economic territory and residency

The production of meaningful statistics about the economically active population requires that the economic territory to which the population relates is accurately defined.

The concept of economic territory in the 2008 SNA is not identical to the concept of country. The most commonly used definition is a territory under the effective economic control of a single government, and as such usually approximates the geographic borders of a country.

In principal, the economic territory of Australia as defined in the ASNA includes the geographic territory under the effective control of the Australian government, including:

- any islands belonging to Australia which are subject to the same fiscal and monetary authorities as the mainland;
- the land area, airspace, territorial waters, and continental shelf lying in international waters over which Australia enjoys exclusive rights or over which it has, or claims to have, jurisdiction in respect of the right to fish or to exploit fuels or minerals below the sea bed; and
- territorial enclaves in the rest of the world (that is, geographic territories situated in the rest of the world and used, under international treaties or agreements, by general government agencies of the country). Territorial enclaves include embassies or consulates, military

bases, scientific stations, etc. It follows that the economic territory of Australia does not include the territorial enclaves used by foreign governments which are physically located within Australia's geographical boundaries.

Specifically, the economic territory of Australia consists of geographic Australia including Cocos (Keeling) Islands, Christmas Island, Norfolk Island, Jarvis Bay, Australian Antarctic Territory, Heard Island and McDonald Islands, Territory of Ashmore Reef and Cartier Island, and the Coral Sea Islands.

Within the Australian labour household surveys context, a distinction must be made between: the territories which determine the estimated resident population of Australia; those which are covered by household survey collection procedures; and those used to benchmark or 'weight' household survey estimates (i.e., the population benchmarks). See [Information Paper: Improved Methods for Estimating Net Overseas Migration, 2006 \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/3107.0.55.003\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/3107.0.55.003).

- The "other territories" of Australia, namely Jervis Bay, Christmas Island, Cocos (Keeling) Island, and Norfolk Island after the 2016 Census, are included in the estimated resident population of Australia, but excluded from household survey collection procedures and population benchmarks.
- The "external territories" of Australia, namely Territory of Ashmore and Cartier Islands, Coral Sea Islands Territory, Australian Antarctic Territory, and Territory of Heard and McDonald Islands, are not included in the estimated resident population, household survey collection procedures or the population benchmarks.

Within the Australian labour business surveys context, no further geographical restrictions are imposed. Samples for business surveys are typically selected from the ABS Business Register, and therefore all businesses within the economic territory of Australia may be included, providing they meet other relevant scope restrictions.

Residency

Within the 2008 SNA, residency is defined as the economic territory with which an institutional unit or individual has the strongest connection - in other words, its centre of predominant economic interest. Each institutional unit or individual is a resident of one and only one economic territory.

Actual or intended residence for one year or more is used as an operational definition in many countries (including Australia) to facilitate international comparability.

Residence of individuals and households

Persons are considered to have the strongest connection with the economic territory in which they physically reside. In the broadest sense, the total population consists of either all usual residents of the country (the usually resident or de jure population) or all persons present in the country (the de facto population) at a particular time.

Household surveys use the first population category, the usually resident population. All persons who are usually resident in Australia are considered part of the usually resident population, regardless of nationality, citizenship or legal status.

To determine whether a person is usually resident, Australia has adopted a 12 in 16 month rule. This rule specifies that, to be considered a usual resident, a person must have been (or expect to be) residing in Australia for 12 months or more in a 16 month period. This 12 month period does not need to be consecutive.

The application of the 12 in 16 month rule in the labour household survey context cannot be so precise. A screening question asks if the respondent is a short term resident and, if so, they are excluded from the survey. Labour household surveys also include residents who are temporarily overseas for less than six weeks. However, the 12 in 16 month rule is explicitly applied in the estimated resident population, and the population benchmarks used to weight the LFS. For more information regarding the 12 in 16 month rule, refer to Information Paper: Improved Methods for Estimating Net Overseas Migration, 2006 (cat. no. 3107.0.55.003).

Residence of students

In the 2008 SNA, the residence of students is described as:

"...people who go abroad for full-time study generally continue to be resident in the territory in which they were resident prior to studying abroad. This treatment is adopted even though their course of study may exceed a year. However, students become residents of the territory in which they are studying when they develop an intention to continue their presence in the territory of study after the completion of the studies."

Within the Australian labour household survey context, there is no special treatment for students and they are treated using the same 12 in 16 month rule. Within the Australian business survey context, there is no distinction made between students and other persons, such that they are included if they are an employee, irrespective of their length of stay in the country.

Residence of enterprises

Within the labour business survey context, the de facto population is used, that is, all employees are included irrespective of their length of stay in the country. This is consistent with the SNA production boundary.

As a general principle, an enterprise is resident in an economic territory when it is engaged in a significant amount of production of goods or services from a location in the territory.

An enterprise is resident in an economic territory when there exists, within the economic territory, some location, dwelling, place of production, or other premises on which or from which the unit engages and intends to continue engaging, either indefinitely or over a finite but long period of time, in economic activities and transactions on a significant scale. The location need not be fixed, so long as it remains within the economic territory.

Corporations and non-profit institutions normally may be expected to have a centre of economic interest in the economy in which they are legally constituted and registered. Corporations may be resident in economies different from their shareholders, and subsidiaries may be resident in different economies from their parent corporations. When a corporation, or unincorporated enterprise, maintains a branch, office, or production site in another territory to engage in a significant amount of production over a long period of time (usually one year or more) but without creating a corporation for the purpose, the branch, office, or site is considered to be a quasi-corporation (i.e., a separate institutional unit) resident in the territory in which it is located.

Within the Australian business survey context, residency is determined by deriving the sample selection of business frames from the Australian Business Register, which is an administrative data source maintained by the Australian Taxation Office (ATO). The registration of a business by the ATO is deemed to be a demonstration that the business has a centre of economic interest within Australia.

Residency in the Australian Context

Applying residency concepts to survey collections:

Business surveys:

- include non-residents living in Australia employed by Australian companies, such as short-term foreign students studying in Australia for periods of less than 12 months.
- include estimates of non-resident persons engaged by Australian businesses operating overseas that have no intention to stay in the non-resident country for more than 12 months.

Household surveys:

- include Australian residents living in Australia employed by non-resident enterprises, for example Australians engaged by foreign embassies and consulates and by overseas companies that have no intention of staying in Australia for more than 12 months.
- do not include estimates of non-resident persons engaged by Australian businesses operating overseas, that have no intention to stay in the non-resident country for more than 12 months.

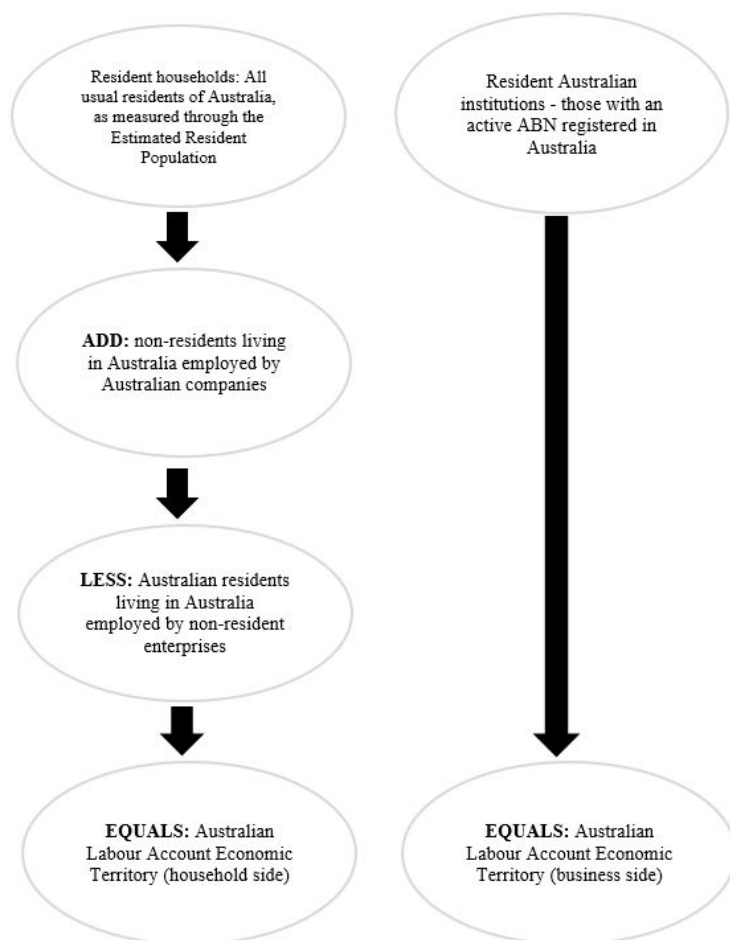
Applying residency concepts in practice, the Australian Labour Account makes the following scope adjustments to household survey estimates:

- add: non-residents living in Australia employed by Australian companies. Non-residents such as short-term foreign students studying in Australia for periods of less than 12 months, short-term migrants and working tourists are included because they contribute to Australia's economic production and are included in the Compensation of Employees component of Gross Domestic Product (GDP).
- less: Australian residents living in Australia employed by non-resident enterprises, for example Australians engaged by foreign embassies and consulates and by overseas companies that have no intention of staying in Australia for more than 12 months.

The Australian Labour Account does not include estimated numbers of non-resident persons engaged by Australian businesses operating overseas, but with no intention to stay in the non-resident country for more than 12 months. While conceptually included in the scope of the Australian Labour Account, due to lack of data no estimate has been included for the foreign workers they may employ.

The economic territory used in the Australian Labour Account is summarised below.

Australian Labour Account economic territory



The diagram shows that resident households (all usual residents of Australia as measured through the Estimate Resident Population), PLUS non-residents living in Australia employed by Australia companies, LESS Australian residents living in Australia employed by non-resident enterprises, EQUALS Australian Labour Account economic territory (household side). Resident Australian institutions - those with an active ABN registered in Australia EQUALS Australian Labour Account economic territory (business side).

Labour Account sources

Different data sources have been used in compiling the four quadrants of the Australian Labour Account. In general, the same data sources have been used to compile both quarterly and annual labour account estimates. Quarterly survey estimates have also been benchmarked to annual survey estimates where possible.

Australian Labour Account data at an industry level are derived where possible from data classified by industry reported in both business and household surveys. Where Australian Labour Account data at an industry level are not reported in surveys, the industry detail has been modelled using alternative sources.

The Australian Labour Account uses both published and unpublished data from various sources. These are detailed below.

Source	Quadrant	Data Item	Data item detail	Publication Status
Job Vacancies Survey	Jobs	Job Vacancies	Job vacancies	Published data
Internet Vacancy Index (Department of Employment, Skills, Small and Family Business)	Jobs	Job Vacancies	Job vacancies	Unpublished data
Economic Activity Survey (EAS)	Jobs	Filled Jobs (Business Sources)	Private sector	Published data
Quarterly Business Indicators Survey (QBIS)	Jobs	Filled Jobs (Business Sources)	Private sector	Unpublished data
Survey of Employment and Earnings (SEE)	Jobs	Filled Jobs (Business Sources)	Public sector	Unpublished data for industry
Wage and Salary Earners, Australia	Jobs	Filled Jobs (Business Sources)	Used for backcasting	Published data
Quarterly Business Indicators Survey (QBIS)	Jobs	Adjustments to Filled Jobs (Business Sources)	Industry scope adjustment	Unpublished data
Business Register Unit (ABS)	Jobs	Adjustments to Filled Jobs (Business Sources)	Industry scope adjustment	Unpublished data
National Accounts	Jobs	Adjustments to Filled Jobs (Business Sources and Household Sources)	Defence personnel	Unpublished data
Labour Force Survey (LFS), monthly, detailed	Jobs	Adjustments to Filled Jobs (Business Sources)	Contributing Family Workers	Published data
Child Employment Survey (2006)	Jobs	Adjustments to Filled Jobs (Business Sources and Household Sources)	Child workers	Published and Unpublished data
Labour Force Survey (LFS), monthly, detailed	Jobs	Filled Jobs (Household Sources)	Base number	Published data
Labour Force Survey (LFS), quarterly	Jobs	Filled Jobs (Household Sources)	Industry distribution	Published data
Labour Force Survey (LFS), monthly	Jobs	Filled Jobs (Household Sources)	Labour Force Survey Main Job	Published data
National Accounts	Jobs	Adjustments to Main Job	Defence personnel	Unpublished data
Migration, Australia	Jobs	Adjustments to Main Job	Non-residents living in Australia employed by Australian companies/business entities : Main job students and Main job non-students	Unpublished data
Overseas Arrivals and Departures, Australia	Jobs	Adjustments to Main Job	Non-residents living in Australia employed by Australian companies/business entities : Main job students and Main job non-students	Unpublished data
Balance of Payments (ABS)	Jobs	Adjustments to Main Job	Australian residents living in Australia and employed by overseas companies/business entities	Unpublished data
Child Employment Survey (2006)	Jobs	Adjustments to Main Job	Child workers	Published and Unpublished data
Labour Force Survey (LFS), monthly	Jobs	Labour Force Survey Secondary Job	Labour Force Survey Secondary Job	Unpublished data
Migration, Australia	Jobs	Adjustments to Secondary Job	Non-residents living in Australia employed by Australian companies/business entities - secondary job	Unpublished data
Overseas Arrivals and Departures, Australia	Jobs	Adjustments to Secondary Job	Non-residents living in Australia employed by Australian companies/business entities - secondary job	Unpublished data
Linked Employer Employee Database (LEED)	Jobs	Secondary jobs	Industry of employment, secondary jobs	Published and Unpublished data
Labour Force Survey (LFS), monthly	Persons	Labour Force Survey Employed Persons	Labour Force Survey Employed Persons	Published data
National Accounts	Persons	Adjustments to Employed Persons	Defence personnel	Unpublished data
Migration, Australia	Persons	Adjustments to Employed Persons	Non-residents living in Australia employed by Australian companies/business entities	Unpublished data
Overseas Arrivals and Departures, Australia	Persons	Adjustments to Employed Persons	Non-residents living in Australia employed by Australian companies/business entities	Unpublished data
Balance of Payments (ABS)	Persons	Adjustments to Employed Persons	Australian residents living in Australia employed by overseas companies/business entities	Unpublished data
Child Employment Survey (2006)	Persons	Adjustments to Employed Persons	Child Workers	Published and Unpublished data
Labour Force Survey (LFS), monthly	Persons	Labour Force Survey Unemployed	Labour Force Survey Unemployed	Published data
Labour Force Survey (LFS), monthly	Persons	Labour Force Survey Underemployed Persons	Labour Force Survey Underemployed Persons	Published data
Labour Force Survey (LFS), monthly	Persons	Labour Force Survey Underutilised Persons	Labour Force Survey Underutilised Persons	Published data
Labour Force Survey (LFS), monthly	Persons	Labour Force Survey Not in the Labour Force	Labour Force Survey Not in the Labour Force	Published data
Labour Force Survey (LFS), monthly	Volume	Labour Account Hours Actually Worked in All Jobs	Hours actually worked in all jobs	Unpublished data
Survey of Employee Earnings and Hours (EEH)	Volume	Labour Account Hours Paid For	Hours paid for	Unpublished data
Survey of Employee Earnings and Hours (EEH)	Volume	Labour Account Ordinary Hours	Ordinary hours	Unpublished data
Survey of Employee Earnings and Hours (EEH)	Volume	Labour Account Overtime Hours	Overtime hours	Unpublished data
National Accounts	Volume	Adjustments to hours actually worked in all jobs	Hours actually worked by Defence personnel	Unpublished data
Migration, Australia	Volume	Adjustments to hours actually worked in all jobs	Hours actually worked by non-residents living in Australia employed in Australia	Unpublished data
Overseas Arrivals and Departures, Australia	Volume	Adjustments to hours actually worked in all jobs	Hours actually worked by non-residents living in Australia employed in Australia	Unpublished data
Child Employment Survey (2006)	Volume	Adjustments to hours actually worked in all jobs	Hours actually worked by child workers	Published and Unpublished data

Source	Quadrant	Data Item	Data item detail	Publication Status
Balance of Payments (ABS)	Volume	Adjustments to hours actually worked in all jobs	Hours actually worked by Australian residents living in Australia employed by overseas companies/business entities	Unpublished data
Labour Force Survey (LFS), quarterly	Volume	Hours Sought by Unemployed	Hours sought by Unemployed	Published and Unpublished data
Labour Force Survey (LFS), quarterly	Volume	Additional Hours Sought by Underemployed	Additional hours sought by Underemployed	Published and Unpublished data
National Accounts	Payments	Compensation of Employees	Compensation of Employees	Unpublished data
National Accounts	Payments	Wages and Salaries	Wages and Salaries	Unpublished data
National Accounts	Payments	Employers' Social Contributions	Employers' Social Contributions	Unpublished data
Wage and Salary Earners, Australia	Payments	Compensation of Employees	Used to backcast Compensation of Employees	Published data
National Accounts	Payments	Employers' Payroll taxes	Employers' Payroll taxes	Unpublished data
National Accounts	Payments	Recruitment Costs	Recruitment Costs	Published and Unpublished data
Job Vacancies Survey	Payments	Recruitment Costs	Recruitment Costs	Published data
National Accounts	Payments	Training Costs	Training Costs	Published and Unpublished data
Quarterly Business Indicator Surveys	Payments	Training Costs	Training Costs	Published data
Government Finance Statistics (GFS)	Payments	Employment subsidies	Employment subsidies	Unpublished data
National Accounts	Payments	Labour income from self-employment	Labour income from self-employment	Unpublished data

Labour Account methods

Compilation methods

The Australian Labour Account data tables are compiled using different methods, namely interpolation, extrapolation, backcasting and benchmarking. Methods chosen are based on two factors: the context in which the data were originally collected, and ability to fill data gaps between collection points or reference periods.

Interpolation

Interpolation is a method of constructing new data points within the range of a discrete set of known data points. Where interpolation is used in the Australian Labour Account, it is generally designed to create a quarterly series between two annual data points when data with a quarterly frequency are not available. An example of this is measuring the number of public sector jobs, where quarterly data are estimated from two annual data points.

Extrapolation

Extrapolation is the process of estimating values of a variable beyond its original observed range. Some estimates in the labour account are derived by extrapolating data using various indicators, as information necessary to compile a comprehensive and complete account may not be sufficiently timely. For example, as there is a time lag between the current reference period and the release of Government Finance Statistics (GFS), data for employment subsidies in the Australian Labour Account are extrapolated forwarded based on the movements of previously observed data.

Backcasting

Backcasting is the process of estimating values of a variable prior to its original observed range, usually through analysing the growth rates or proportional distribution of a conceptually related series. In addition, some estimates for earlier time periods in the Australian Labour Account are backcast from partially observed information. For example, data from the Job Vacancies Survey are not available on the current industry classification prior to 2009, however the total number of job vacancies is known. Data on the current industry classification for earlier time periods have been backcast using by applying a concordance between the previous and current industry classifications, with the additional constraint that the known total number of job vacancies must be maintained.

Benchmarking

Benchmarking is the processes of combining sub-annual (quarterly) indicator data and annual data, and aligning them to produce quarterly economic data that combine the robustness of the annual 'benchmark' source while reflecting the pattern of sub-annual movement. Benchmarks (or annual data) are usually of higher quality because they come from annual surveys, which draw on more complete source data (e.g. balanced and audited company financial accounts), conduct more detailed enquiries, and generally have larger sample sizes. To create a quarterly series, the annual data provides the overall levels, to which a conceptually related quarterly indicator series is benchmarked. An example of this in the Australian Labour Account is estimating private sector filled jobs by benchmarking quarterly jobs data to annual data.

There are a number of methods used to benchmark flow data, depending on the type of data to be benchmarked. The method used the majority of the time, due to its accuracy and ease of implementation, is the 'Proportional Denton Method'. This method preserves the movement of the quarterly data by minimising the absolute difference in the relative adjustments of two neighbouring quarters (i.e. keeping the benchmarked data to indicator data ratio as constant as possible over the time series), under the constraint that the sum of the quarters is equal to the annual data for each benchmark year.

The Australian Labour Account uses a modified Proportional Denton Method to benchmark the Quarterly Business Indicators Survey (QBIS) industry data to the annual industry data from the Economic Activity Survey (EAS).

The standard Proportional Denton Method is modified for use in the Australian Labour Account in the following ways:

- the Proportional Denton Method is generally used only in relation to flow data. In the Australian Labour Account, the mathematics underlying the Proportional Denton method have been modified to apply to stock data;
- the Proportional Denton Method is generally not used to extrapolate data series beyond their observed range. In the Australian Labour Account, annual industry data from the EAS, which are not yet available, have been extrapolated for the latest year as part of the modified Proportional Denton Method by assuming a benchmark data to indicator data ratio of one;
- in the context of flow data, the annual benchmark data measures a variable over an entire year and so should (theoretically) be equal to the sum of the four indicator data points for that year. In contrast, stock data measure a variable at a single point in time, and the annual stock benchmark data could simply be considered a more accurate measure of the indicator data of that quarter. The modified Proportional Denton Method used in the Australian Labour Account imposes an additional constraint for stock estimates, that the benchmarked quarterly data must be equal to the annual benchmark data in the June quarter of each year while maintaining, as much as possible, the quarterly movements of the indicator data.

For more information regarding the Proportional Denton Method, refer to paragraph 7.40 in the Australian System of National Accounts: Concepts, Sources and Methods.

Annual Australian Labour Account data

Data in the Australian Labour Account are compiled with quarterly estimates as the primary level of data compilation, with annual estimates subsequently produced from quarterly data. The method used to annualise data varies for each quadrant, depending on whether data are stock or flow estimates.

Stock data

The Jobs and Persons quadrants contain stock data, which are data that measure certain attributes at a point in time. Data in these quadrants are annualised using a simple arithmetic average of the four quarterly estimates. While these average annual levels are not true stock values, in the sense that they are not measured at a specific point in time, the purpose of presenting annual estimates as an arithmetic average is to minimise issues with using any particular quarterly observation to represent an annual stock, as any particular quarterly observation may under or over represent “usual” stock levels for a particular year. This is particularly relevant for industries which exhibit strongly seasonal employment levels, for example retail trade.

For example, consider the example below of two industries which exhibit the following patterns in employed persons over a one year period.

Time period	Industry A – employed persons (000's)	Industry B – employed persons (000's)
Sep-15	115	220
Dec-15	120	300
Mar-16	125	230
Jun-16	130	220
2015-16 annual average	123	243

The annual average stock level for 2015-16 for Industry A is 123 thousand employed persons. The choice of using an annual average, an end of year stock level (of 130 thousand employed persons) or a mid-point stock level (of 120 thousand employed persons) for this industry does not significantly change the annual level of employed persons.

For Industry B, which shows a strong cyclical increase in employed persons each December, the choice of annual stock level is more significant. If an annual average stock level (of 243 thousand employed persons in 2015-16) or end of year stock level (of 220 thousand employed persons) were chosen, a much lower annual stock level would result than if a mid-point stock level (of 300 thousand employed persons) were used.

Flow data

The Labour Volume and Labour Payments quadrants contain flow data, which represent a measure of activity over a given period. Data in these quadrants are annualised as the sum of the four quarterly estimates.

Seasonal adjustment

Any original time series can be thought of as a combination of three broad and distinctly different types of behaviour, each representing the impact of certain types of real world events on the information being collected: systematic calendar related events, short-term irregular fluctuations and long-term cyclical behaviour.

Seasonal adjustment is a statistical technique that attempts to measure and remove the effects of systematic calendar related patterns including seasonal variation to reveal how a series changes from period to period. Seasonal adjustment does not aim to remove the irregular or non-seasonal influences, which may be present in any particular data series. This means that movements of the seasonally adjusted estimates may not be reliable indicators of trend behaviour.

The ABS software for seasonal adjustment is the SEASABS (SEASonal analysis, ABS standards) package, a knowledge based seasonal analysis and adjustment tool. The seasonal adjustment algorithm used by SEASABS is based on the X-11 Variant seasonal adjustment software from the U.S. Census Bureau.

Trend estimates

In cases where the removal of only the seasonal element from an original series (resulting in the seasonally adjusted series) may not be sufficient to allow identification of changes in its trend, a statistical technique is used to dampen the irregular element. This technique is known as smoothing, and the resulting smoothed series are known as trend series.

Smoothing, to derive trend estimates, is achieved by applying moving averages to seasonally adjusted series. A number of different types of moving averages may be used; for quarterly series a seven term Henderson moving average is generally applied by the ABS. The use of Henderson moving averages leads to smoother data series relative to series that have been seasonally adjusted only. The Henderson moving average is symmetric, but asymmetric forms of the average may be applied as the end of a time series is approached. The application of asymmetric weights is guided by an end weight parameter, which is based on the calculation of a noise-to-signal ratio (i.e. the average movement in the irregular component, divided by the average movement in the trend component). While the asymmetric weights enable trend estimates for recent periods to be produced, they result in revisions to the estimates when subsequent observations are available.

Revisions to trend series may arise from:

- the availability of subsequent data;
- revisions to the underlying data;
- identification of and adjustment for extreme values, seasonal breaks and/or trend breaks;
- re-estimation of seasonal factors; and
- changes to the end weight parameter.

For more information about ABS procedures for deriving trend estimates and an analysis of the advantage of using them over alternative techniques for monitoring trends, see [Information Paper: A Guide to Interpreting Time Series - Monitoring Trends \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/1349.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/1349.0).

In the Australian Labour Account, quarterly tables are produced in original, seasonally adjusted and trend terms. For the purpose of deriving the annual average level from quarterly stocks of jobs and employed persons using an arithmetic average, original quarterly series are used.

Balanced tables

After adjusting for conceptual and scope differences between data sources, a statistical discrepancy remains between the number of filled jobs as reported by businesses and the number of filled jobs as reported by households.

These discrepancies represent the cumulative impact of data source error, including survey error, and modelling error. Survey error includes both sampling error and non-sampling error. Sampling error is the predictable variability arising from the use of samples, rather than a complete enumeration of the populations of enterprises and households. Non-sampling error is all other error present in an estimate, and includes:

- Error arising from the reliability of the survey population and related benchmark data, e.g. the accuracy, completeness and timeliness of the Business Register from which business survey samples are drawn, or the reliability of Estimated Resident Population data used in benchmarking the Labour Force Survey;
- Error arising from data used in the estimation and imputation procedures applied in both business and household surveys;
- Error embedded in the estimation and imputation models used in surveys, for example incorrect assumption that missing firm data is similar to that of reporting firms of comparable size in the same industry; and
- Error made by respondents in reporting data - for example, the Labour Force Survey relies on one responsible adult in each household to accurately report on the employment status of all other adults in the household, including industry of employment and hours worked in the survey reference week. Industry can be misreported where people are employed by labour hire firms, but actually work in other industries such as Mining, Construction or Manufacturing.

Error can occur in non-survey data sources, such as missing data or misclassification in government administrative records used directly in the Australian Labour Account. For example, error could occur in the industry classification of sponsored visa holders, or in the reported number of persons in the permanent defence forces.

Modelling error reflects errors embedded in the modelling assumptions used in the Australian Labour Account, for example in assuming that the proportion of children aged under 15 years who work has remained constant since 2006, or in assuming that Quarterly Business Indicators Survey employment movements accurately reflect quarterly change in the latest available annual data.

The balanced Australian Labour Account estimates apply knowledge of the known strengths and weaknesses of data sources and methodologies, to derive a single estimate of the number of filled jobs.

The balanced estimate of numbers of filled jobs impacts on other data in the Australian Labour Account that incorporate that estimate in their calculation. This includes balanced estimates of numbers of persons employed, hours paid for and hours worked.

Two general observations about data source quality are relevant in deriving a balanced estimate of numbers of filled jobs:

- Household estimates of numbers of filled jobs are considered more reliable at a total economy level. Household data are mainly sourced from the Labour Force Survey, which applies a consistent methodology and asks a consistent set of questions of a statistically robust sample of persons about the number of jobs held by employed persons in their household. By contrast, no single business survey covers the whole economy. Estimates of the total number of filled jobs from the business side are derived from three separate surveys (Economic Activity Survey, Survey of Employment and Earnings, and Quarterly Business Indicators Survey), supplemented by data obtained from the Australian Business Register. Each source has a different methodology, a different sample, and asks different questions. Adjustments are required to counter overlap. Growth in household side filled jobs is more consistent over time with growth in related economic data (Gross Domestic Product and Compensation of Employees) at a total economy level than growth in business side data.
- Business sources are considered more reliable in estimating the distribution of jobs across industries. The numbers of filled jobs reported by each business survey respondent are automatically coded to the industry classification of that business. This implies that labour input is correctly linked to related production, employment related costs and compensation.

Whilst additional considerations are taken into account at the industry level, the balanced estimate of filled jobs generally incorporates the advantage of the industry distribution derived from business side data, within a total economy estimate sourced from household side data.

Revisions in the Australian Labour Account

Revisions are a change in the value of a published estimate. Revisions arise from the correction of errors, the incorporation of more up-to-date data, reassessment of seasonal factors, and from time to time the introduction of new concepts or improved data sources and methods.

Revisions are an inevitable consequence of the process of producing the Australian Labour Account. Revisions reflect both the complexity of measurement, and the need to trade off some level of precision in order to provide timely estimates, to maximise their use in analysis of current economic conditions.

Quarterly revisions

- Updates to the Estimated Resident Population (ERP), usually affecting the latest eight quarters of data, resulting in quarterly revisions to the Labour Force Survey statistics on persons, jobs and hours worked;
- Revisions to Quarterly Business Indicator Survey statistics on filled jobs, arising from replacement of imputed data with actual responses following late receipt of survey questionnaires; and
- Revisions to previously published seasonally adjusted and trend series, which will be revised to incorporate the seasonal effects of the latest quarterly data. This process is referred to as concurrent seasonal adjustment.

Annual revisions

- Revisions which reflect the cumulative impact of previous revisions to quarterly data;
- Revisions to Economic Activity Survey statistics on filled jobs, arising from replacement of imputed data with actual responses following late receipt of survey questionnaires;
- Revisions to Compensation of Employees and Gross Mixed Income following annual benchmarking of the Australian National Accounts, usually affecting the latest three years of quarterly data; and
- Revisions to expenditure on recruitment services and training, following release of updated Input-Output Tables.

Other periodic revisions

- Five yearly post-Census benchmarking of ERP, resulting in revisions to the household Labour Force Survey statistics on persons, jobs and hours worked; and
- Revisions to Compensation of Employees and Gross Mixed Income arising from scheduled National Accounts historical revisions, potentially affecting quarterly data back to 1960.

Ad hoc revisions

- All data sources can be subject to revisions arising from the correction of errors. These can include data capture and compilation errors, mistakes in classification, or respondent misreporting; and
- Australian Labour Account data are also subject to revision arising from internal compilation errors.

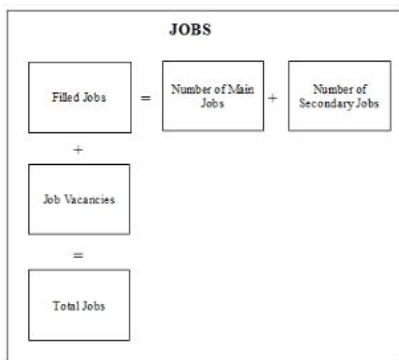
ABS and international data quality assessment frameworks include revisions history as one of the indicators of quality. A revisions history assists users in assessing the probability and potential scale of change to published data. The ABS publishes revisions to previously published data with each quarterly update of the Australian Labour Account.

Jobs quadrant

The Jobs quadrant provides data on the number of jobs, both filled and vacant. Estimates from business surveys are balanced with

estimates from household surveys.

Jobs quadrant



The diagram shows that in the Jobs quadrant: Number of main jobs plus Number of secondary jobs equals Filled jobs. Filled jobs plus Job vacancies equals Total jobs.

Jobs concepts

The concept of a "job" is central to the Australian Labour Account. It is the mechanism through which people engage in production.

The Oxford English Dictionary has multiple meanings for the word, one of which approximates the concept as it is applied in the Australian Labour Account and the 2008 System of National Accounts (2008 SNA) – "a task or piece of work, especially one that is paid".

The 2008 SNA does not explicitly define a job. Rather, it observes the agreement between an employee and the employer defines a job, and each self-employed person has a job (2008 SNA, 19.30). In application, a self-employed person is both the employer and employee. A job is position held by a person that involves work, duties or responsibilities; it may or may not provide returns of compensation or benefits to the individual.

As the dictionary definition implies, not all jobs are paid, either in money or in kind. People can be engaged in productive economic activity within an institutional unit for no apparent reward, in which case they are contributing to output but receiving no compensation. The 2008 SNA concept of a job includes these people as volunteer labour (2008 SNA, 19.39).

Jobs are created by enterprises. In the case of the self-employed person, the International Labour Organisation (ILO) defines these jobs as those where the remuneration is directly dependent upon the profits (or the potential for profits) derived from the goods and services produced (where own consumption is considered to be part of profits). The incumbents make the operational decisions affecting the enterprise, or delegate such decisions while retaining responsibility for the welfare of the enterprise. In this context, "enterprise" includes one person operations.

In summary, and in the context of the Australian Labour Account, a job is a set of production related tasks that can be assigned to and undertaken by a person, and for which they are usually, but not necessarily, remunerated either in money or in kind.

Production related tasks are constrained to economic activity within the 2008 SNA production boundary, and jobs are created and maintained by institutional units (Type of Activity Units within Enterprise Groups in the Australian context).

The Australian Labour Account includes all jobs created and maintained by institutional units (that is, households, legal entities and social entities) resident in Australian economic territory, involving economic activity within the Australian application of the 2008 SNA production boundary.

Estimates of movements in the number of jobs in the economy provide a measure of labour market performance and capacity.

Jobs characteristics

Jobs can be classified according to:

- inherent job characteristics (e.g. whether the job is full-time or part-time),
- characteristics of the person holding the job (e.g. whether the job is filled by a self-employed person or an employee), or
- characteristics of the enterprise creating the job (e.g. the industry or institutional sector to which the job relates).

Status in employment

In the Australian context, self-employment according to the ILO definition is not separately identified. Rather, jobs are distinguished according to the status in employment categories of the people filling the job.

These categories include:

- Employee;

- Owner manager of incorporated enterprise with employees;
- Owner manager of incorporated enterprise without employees;
- Owner manager of unincorporated enterprise with employees;
- Owner manager of unincorporated enterprise without employees; and
- Contributing family workers.

The closest approximation to the ILO concept of self-employment in the Australian context is the aggregation of the four “owner manager” status in employment categories.

Employees

Employees are those employed persons who do not operate their own incorporated or unincorporated enterprise. An employee works for a public or private employer and receives remuneration in wages, salary, on a commission basis (with or without a retainer), tips, piece rates, or payment in kind.

Owner managers of incorporated enterprises

An owner manager of an incorporated enterprise is a person who operates his or her own incorporated enterprise, that is, a business entity which is registered as a separate legal entity to its members or owners (also known as limited liability company).

An owner manager of an incorporated enterprise (an OMIE) may or may not hire one or more employees in addition to themselves and/or other owners of that business.

Owner managers of unincorporated enterprises

In the Australian Labour Account, own-account workers and employers employed in their own enterprises are referred to as Owner Managers of Unincorporated Enterprises (OMUEs). OMUEs are persons who operate their own unincorporated enterprise, or engage independently in a profession or trade. An owner manager of an unincorporated enterprise may or may not hire one or more employees in addition to themselves and/or other owners of that business.

Contributing family workers

A contributing family worker is a person who works without pay in an economic enterprise operated by a relative. Contributing family workers, including those working without pay in unincorporated enterprises engaged wholly or partly in market production, are also treated as self-employed (2008 SNA, 7.30b).

The ILO defines a contributing family worker as a person who holds a self-employment job in an enterprise operated by a related person, and who cannot be regarded as a partner because the degree of his or her commitment to the operation of the enterprise, in terms of the working time or other factors to be determined by national circumstances, is not at a level comparable with that of the head of the establishment.

Internationally the concept is restricted to those living in the same household, however Australia has not applied the same criteria of cohabitation in its implementation. For example, an adult child who makes unpaid contributions of labour to a family business operated by their parents, and does not live in the same household as the parents, is still considered to be a contributing family worker.

Own-account workers engaged in the production of goods exclusively for own final use by their household (such as subsistence farming or do-it-yourself construction of own dwellings), are considered employed according to the definition of employment adopted by Thirteenth International Convention of Labour Statisticians (ICLS). Households producing unpaid domestic or personal services (e.g., housework, caring for family members) for their own final consumption are excluded, as such activities fall outside the 2008 SNA production boundary and are not considered employment.

Jobs in the Australian Labour Account

Jobs which are in and out of scope of the Australian Labour Account are summarised in the table below.

Jobs in scope	Jobs out of scope
Paid employment with formal work agreements – i.e. an employer/employee relationship.	Positions which are purely voluntary and no remuneration is received, either in cash or in kind.
Owner managers of businesses – i.e. self-employed persons.	Activities relating to the production of unpaid domestic services.
Unpaid contributions of labour to a family business or farm – i.e. contributing family workers.	Activities and positions outside of Australia's economic territory.
Activities relating to the production of goods for own consumption.	Activities relating to unreported illegal transactions.

Jobs and persons

The number of jobs in the economy exceeds the number of persons employed, to the extent that some employed persons have more than one job in the same period. An individual with more than one job may do these successively, as when the person works for part of the week in one job and the rest of the week in another, or in parallel, as when the person has an evening job as well as a daytime job. In addition, the number of jobs in the economy may be reduced when compared to the number of persons employed in instances of formal

job sharing arrangements.

Employers may not be aware of, and in any case are not asked to provide information on, secondary jobs undertaken by their employees. When employers supply information on the number of employees, they actually provide information on the number of jobs they hold. This is because the same employee would be reported separately by each employer. The distinction between the number of jobs and the number of employed persons is one issue that is informed by the Australian Labour Account.

The Australian Labour Account recognises this difference by accounting for multiple job holding, and reports the number of jobs in the Jobs quadrant and employed persons in the Persons quadrant. However, the Australian Labour Account does not compile estimates of formal job sharing, as there is currently no available data source to measure this, and it is particularly unlikely to be reported accurately by businesses.

The statistics derived from the Labour Force Survey are designed to produce estimates of the number of people engaged in economic activity. The statistics derived from ABS business surveys count the number of jobs in which people are employed. For example, a person holding multiple jobs with different employers would be counted once in ABS household surveys as an employed person, but in ABS business surveys would be counted multiple times, once by each employer for each job that they held.

A number of examples illustrate this:

- if an unemployed person became employed full-time (by starting one full-time job), then the full-time employment estimate from the Labour Force Survey would increase by one (in a business survey, or a 'filled jobs' count, this would lead to an increase in the filled jobs estimate by one);
- if an unemployed person became employed full-time (by starting two part-time jobs with a total of 35 hours of work or more per week), then the full-time employment estimate from the Labour Force Survey would increase by one (however, in a business survey, or a 'filled jobs' count, this would lead to an increase in the filled jobs estimate by two);
- if a person who was already employed in one part-time job took on another part-time job, this would have differing impacts on the employment estimates from the Labour Force Survey depending on the total number of hours worked: if the sum of hours worked in the two part-time jobs was fewer than 35 hours per week, the employment estimates from the Labour Force Survey would remain unchanged, but if the sum of hours worked was 35 hours or more, the employment estimates from the Labour Force Survey would show a decrease of one in part-time employment and an increase of one in full-time employment (however, in both cases this would lead to an increase of one in the filled jobs estimate from a business survey);
- if a person who was employed in three part-time jobs (working a total of more than 35 hours per week) resigned from these and assumed one full-time job, this would have no impact on the employment estimates from the Labour Force Survey (however, this would lead to a decrease of two in the filled jobs estimate - the number of part-time filled jobs would decrease by three while the number of full-time filled jobs would increase by one); and
- if a person employed in two part-time jobs became unemployed, the employment estimate from the Labour Force Survey would decrease by one (however, this would lead to a decrease of two in the filled jobs estimate from a business survey).

The Proportion of Secondary Jobs presents the number of secondary jobs as a proportion of the total number of filled jobs for each industry and the total economy. This measure provides insight into the relative number of secondary jobs in each industry, and enables comparison across industries and with each industry to an economy wide average.

Proportion of Vacant Jobs

The development of the Australian Labour Account has made it possible to produce an important new labour market measure – the Proportion of Vacant Jobs (PVJ).

The PVJ provides a useful labour demand-side view of relative labour demand, at the industry level, presenting the relationship between unmet demand (job vacancies) and met demand (filled jobs) within the Australian Labour Account.

The PVJ is calculated as the number of vacant jobs as a proportion of total jobs. This derived measure is a function of filled jobs and job vacancies. By bringing together met demand and unmet demand, the PVJ provides new insights into changes in the labour market.

In addition to providing insights into cyclical labour demand and employment, changes in the PVJ over time can also highlight that some of the following may be occurring:

- Changing employment capacity – there may be indications that the industry is nearing its full employment potential or, conversely, that there is the possibility of future employment growth;
- Job churn – the industry may not be maintaining long term employment, resulting in a high number of job vacancies without long term growth in employment;
- Skill mismatch – current availability of skills may not be able to satisfy employer requirements, resulting in an extended search for appropriately skilled staff; and/or
- Changing employment conditions or arrangements - the industry may be transitioning from full-time to part-time roles, or a greater use of contractors or use of labour hire firms.

Understanding changes in the PVJ (and analysing the underlying factors contributing to these changes) will enable Australia to better understand its labour market.

Jobs sources

Source data for quarterly and industry estimates of jobs

Numbers of filled jobs, from the business sources side, are sourced from the following ABS data:

- Quarterly estimates of private sector jobs are estimated from underlying data from the Quarterly Business Indicators Survey (QBIS), from Business Indicators, Australia.
- Quarterly estimates of private sector jobs for out of scope ANZSIC Divisions in QBIS are estimated from the Economic Activity Survey (EAS), published in Australian Industry for ANZSIC Division A (Agriculture, Forestry and Fishing) and Division O (Public Administration and Safety), using quarterly Compensation of Employees as a quarterly indicator series; and
- Quarterly data for the public sector are estimated using underlying data from the Survey of Employment and Earnings (SEE), from Employment and Earnings, Public Sector, using quarterly public sector Compensation of Employees as a quarterly indicator series.

Business survey data are supplemented by ABS business register information, defence force information, child workers information and estimates from the ABS Labour Force Survey for contributing family workers.

The number of filled jobs, from the household survey side, is the aggregate of the number of main jobs and secondary jobs, less jobs with formal job sharing arrangements. Estimates for main jobs and secondary jobs are sourced from underlying data from Labour Force, Australia. Survey based data are supplemented with defence force information, child workers information, information on non-residents working in Australia, and Australian residents living in Australia employed by overseas companies/business entities to account for survey scope restrictions. There is no information currently available on the number of jobs with formal job sharing arrangements.

Numbers of job vacancies are sourced from Job Vacancies, Australia. Data from the Internet Vacancy Index, published by the Department of Employment, Skills, Small and Family Business, are used to supplement ABS survey data for the out of scope ANZSIC Division A (Agriculture, Forestry and Fishing).

The table below summarises data sources used in compiling quarterly and industry estimates of jobs.

Source data	Use in compiling quarterly data
Australian Industry	Used to benchmark quarterly data from Business Indicators, Australia of Employees as a quarterly indicator series. Also used to compile estimates of private sector filled jobs (business sources) for out of scope ANZSIC Divisions in QBIS, using quarterly Compensation.
Business Indicators, Australia	Used to compile quarterly estimates of private sector filled jobs (business sources).
Employment and Earnings, Public Sector	Used to compile estimates of public sector filled jobs (business sources), using quarterly Compensation of Employees as a quarterly indicator series.
Business register information (ABS Business Register Unit)	Used for scope adjustments to private sector filled jobs (business sources).
Defence force information (ABS National Accounts)	Used to estimate out of scope defence jobs for both filled jobs (business sources) and filled jobs (household sources).
Labour Force, Australia	Used to estimate filled jobs (household sources), both main and secondary jobs. Also used to estimate jobs held by out of scope non-residents working in Australia, and unemployment.
Child Employment, Australia, 2006	Used to estimate out of scope child employment for both filled jobs (business sources) and filled jobs (household sources).
Migration, Australia and Overseas Arrivals and Departures, Australia	Used to estimate jobs held by out of scope non-residents working in Australia.
Balance of Payments	Used to estimate out of scope Australian residents living in Australia employed by overseas companies/business entities.
Job Vacancies, Australia	Used to compile job vacancies, and total jobs.
Internet Vacancy Index (Department of Employment, Skills, Small and Family Business)	Used to compile jobs vacancies, and total jobs, for the out of scope Agriculture, Forestry and Fishing ANZSIC Division A.

Source data for annual estimates of jobs

The number of annual filled jobs, from both the business and household side, and the number of annual job vacancies, are compiled from the same data sources as the quarterly estimates.

Jobs methods

The Jobs quadrant provides data on the number of jobs (filled and vacant) as at the end of the quarter. Job statistics are compiled for each ANZSIC industry subdivision and division, and for the economy as a whole. Unless otherwise stated, the methods described apply to both levels of aggregation.

Total jobs

Total jobs is the sum of filled jobs, plus job vacancies.

Filled jobs

Filled jobs (business sources)

The number of filled jobs, from the business sources side, is equivalent to the number of people employed in enterprises resident in the Australian Economic Territory and engaged in economic activity within the scope of the National Accounts production boundary. People counted include employees, working proprietors and partners, employees absent on paid or prepaid leave, employees on workers'

compensation who continue to be paid through the payroll, and contract workers paid through the payroll.

Filled jobs (business sources), for each quarter, is estimated by aggregating:

- For the private sector, the number of employees as at the end of each quarter, sourced from the annual Economic Activity Survey (EAS) and published in Australian Industry;
- For the public sector, the number of employees as at the end of each quarter, derived using underlying data from the Survey of Employment and Earnings (SEE). Public sector SEE data used in the Australian Labour Account exclude units in the non-financial and financial sectors, as they are also in scope of the EAS; and
- Quarterly estimates of underlying Quarterly Business Indicator Survey (QBIS) data from Business Indicators, Australia to represent private sector employment in ANZSIC Division K (Finance and Insurance Services), which is out of scope of the EAS.

These three surveys cover most of the ANZSIC industries, except for:

- Class 6310 Life Insurance;
- Class 6330 Superannuation Funds; and
- Class 7600 Defence.

Units in ANZSIC Class 6330 Superannuation Funds are funds set up to provide retirement benefits. Conceptually they are considered to be non-employing units, and therefore would not contribute to Australian Labour Account estimates. As such, no estimate for employment in this industry has been included.

Scope adjustments are made for the following sectors and populations:

Add:

- The number of persons employed (at the end of each quarter) in ANZSIC Class 6310 (Life Insurance), sourced from underlying data from the ABS Business Register. This industry is not included in the EAS or QBIS.
- The number of persons employed in the permanent defence forces as at the end of each quarter, sourced from underlying ABS National Accounts data. Defence force personnel fall outside the scope of the SEE. All defence force personnel in Class 7600 (Defence) are assumed to work in the Public Administration and Safety industry (ANZSIC Division O).
- The number of unpaid contributing family workers for the quarter, sourced from the Labour Force Survey and published in Labour Force, Australia, as unpaid employees are out of scope of ABS business surveys.
- An estimate of the number of child workers (persons aged 5 to 14) who are self-employed, working on a farm, or as a contributing family worker. These data are sourced from ABS household survey data, using underlying data from Child Employment, Australia, 2006. Population estimates from Australian Demographic Statistics are used to extrapolate the number of child workers from the 2006 benchmark level, by assuming that the proportion of the age group working has not changed. Industry proportions are based on underlying Labour Force Survey data on employed persons aged 15 years old. No adjustments are made for child workers who are employees, as these persons are in scope of both EAS and QBIS.

Deduct:

- The number of persons engaged in ANZSIC subdivision 28 Water Supply, Sewerage and Drainage (Employment and Earnings, Public Sector, Australia) as this subdivision is included in the Australian Industry. ABS Business Register data are available from June 2007. For earlier time periods, the movement in filled jobs for the Electricity, Gas, Water and Waste Services industry is applied.

Calculation of filled jobs (business sources) by industry

Data derived from an annual survey are generally considered to be of higher quality than quarterly data due to the larger sample sizes, and are generally subject to less volatility than quarterly run surveys. Annual source data provide overall levels, known as annual benchmarks, from which quarterly estimates are compiled. This ensures consistency between the quarterly and annual labour accounts.

For all ANZSIC industry divisions except A (Agriculture, Forestry and Fishing); K (Financial and Insurance Services) and O (Public Administration and Safety), a mathematical technique (the modified Proportional Denton Method) is used to benchmark quarterly stocks of private sector jobs reported in QBIS to annual data from EAS. This ensures the benchmarked quarterly levels are identical each June quarter, while maintaining the observed quarterly pattern from QBIS as much as possible.

For the most recent quarters, for which EAS year-end data are not available, the previous year-end EAS numbers are extrapolated, also using the modified Proportional Denton Method. Extrapolated data are calculated for up to 6 quarters, due to the 18 month lag in the delivery of EAS data.

For Division A (Agriculture, Forestry and Fishing) and Division O (Public Administration and Safety), for which QBIS data are not available, EAS estimates of the number of jobs is used as an annual benchmark, with quarterly Compensation of Employees used as a quarterly indicator series.

For Division K (Finance and Insurance Services) for which EAS data are not available, employment data reported in QBIS are used directly as the quarterly estimate of private sector job holding.

To calculate the number of public sector filled jobs, underlying data from the Survey of Employment and Earnings (SEE) are used as an annual benchmark, with quarterly public sector Compensation of Employees used as a quarterly indicator series.

EAS data are not available on a consistent industry classification prior to 2009-10. For time periods prior to June 2010, filled jobs as measured from business sources are derived as follows:

- From December quarter 2001 to June quarter 2010: seasonally adjusted movements in Compensation of Employees (which have been price deflated using the Wage Price Index), are applied to the June 2010 level.
- From September quarter 1994 to December quarter 2001, movements in the number of employees from Wage and Salary Earners, Australia are applied to the December 2001 level. These data relate to both the public and private sectors for each industry division except for Division A (Agriculture, Forestry and Fishing), which is limited to the public sector only. Applying movements from the Agriculture industry based on the public sector data produces large movements, given the small level associated with the indicator series. Movements from the Transport and storage industry are instead used as a proxy, given the strong links in production and supply chains between agriculture and transport. As the data are also on a historical industry classification basis, conversion factors based on employees from the Labour Force Survey are applied to approximate the current industry classification.

Filled jobs (household sources)

The number of filled jobs, from the household side, is equal to the number of people employed in main jobs and secondary jobs sourced from the household Labour Force Survey.

Filled jobs (household sources), for each quarter, is estimated by aggregating:

- The number of main jobs reported in the end of quarter reference month (i.e. March, June, September and December) in the household Labour Force Survey and published in Labour Force Australia, and
- The number of secondary jobs reported in the end of quarter reference month in the household Labour Force Survey.

The following scope adjustments are made:

Add:

- The number of persons employed in the permanent defence forces as at the end of each quarter, to the estimate of main jobs. Defence force personnel are not included in the Labour Force Survey, and these data are sourced from underlying ABS National Accounts data. All defence force personnel are assumed to work in ANZSIC Division O (Public Administration and Safety). Permanent defence force personnel are also assumed to work solely in their main job and not have multiple jobs.
- An estimate of the number of child job holders who are aged between 5 to 14 years as at the end of each quarter, to the estimate of main jobs. It is assumed that child workers do not hold secondary jobs. The estimate covers all child workers, regardless of employment status, as all children less than 15 years of age are excluded from the scope of the Labour Force Survey. The estimate is derived from data collected in the 2006 household survey Child Employment, Australia, 2006. Population estimates from Australian Demographic Statistics have been used to extrapolate the number of child workers from the 2006 benchmark level, by assuming the proportion of children in the 5-14 year age cohort who work has remained the same as that recorded in 2006. Industry allocations are based on underlying Labour Force Survey data on the industry of employment of 15 year old persons.
- An estimate of the number of main jobs held by non-resident visitors to Australia employed by Australian resident enterprises to the estimate of main jobs (see Non-resident visitors section below).
- An estimate of the number of secondary jobs held by non-resident visitors employed by Australian resident enterprises to the number of secondary jobs.

Non-resident visitors

Time periods from March 2006 onwards

The Labour Force Survey excludes from its scope non-resident visitors who intend spending less than 12 months in Australia, some of whom are employed during their stay by Australian resident enterprises. As non-resident visitors are included in the scope of business surveys (EAS and QBIS), only household side labour force data are adjusted to include non-resident visitors who are employed.

Data are sourced from short term visitor arrivals statistics from Overseas Arrivals and Departures, Australia and overseas migration data from [Overseas migration \(/statistics/people/population/overseas-migration/2020-21\)](#). Data are obtained for the number of short term visitors who are present in Australia at the end of the reference quarter but who are not included in the Estimated Resident Population. Of interest are those people who have entered the country with a visa that includes working rights. Information on the main reason for journey is also collected. These visa classes and reasons for journey are detailed below.

Visa subclasses and Reasons for journey used in the Australian Labour Account

Visa subclass

- 400 Temporary Work (Short Stay Activity) (from 23/3/13)
- 401 Temporary Work (Long Stay Activity) (from 24/11/12)
- 402 Training and Research (from 24/11/12)
- 403 Temporary Work (International Relations) (from 24/11/12)
- 405 Investor Retirement (from 1/11/04)
- 410 Retirement
- 416 Special Program
- 417 Working Holiday

419 Visiting Academic
 420 Entertainment
 421 Sport
 422 Medical Practitioner
 423 Media and Film Staff
 424 Public Lecturer
 426 Diplomatic or Consular
 427 Domestic Worker Overseas Executive
 428 Religious Worker
 430 Supported Dependent of Australian or NZ Citizen Temp in Australia
 442 Occupational Trainee
 444 Special Category - New Zealand Citizen
 456 Business (Short Stay) (from 1/8/96)
 457 Temporary Work (Skilled) (from 24/11/12) previously Business (Long Stay) (from 1/8/96)
 459 Sponsored Business Visitor (short stay) (from 1/7/00)
 461 New Zealand Citizen (Family Relationship) Temporary Visa (from 26/2/01)
 462 Work and Holiday
 470 Professional Development (from 1/7/03)
 476 Skilled - Graduate (from 1/9/07)
 482 Temporary Skill Shortage (from 18/03/2018)
 485 Temporary Graduate (from 23/3/13) previously Skilled - Graduate (from 1/9/07) (replaced 497)
 500 Student (Temporary) (from 01/07/16)
 570 Independent ELICOS Sector(from 1/7/01)
 571 Schools Sector (from 1/7/01)
 572 Vocational Education and Training Sector (from 1/7/01)
 573 Higher Education Sector (from 1/7/01)
 574 Postgraduate Research Sector (from 1/7/01)
 575 Non-Award Foundation/Other Sector (from 1/7/01)
 576 Ausaid/Defence Sponsored Sector (from 1/7/01)
 995 Diplomatic

Reason for journey

- Business
- Convention/conference
- Education
- Employment
- Exhibition – Other/Not Stated/Not Applicable
- Holiday
- Visiting friends and relatives

Visa subclass and reason for journey - used in calculating short term visitor arrivals

400 Employment
 401 Employment; Education
 402 Employment; Education
 403 Employment; Education
 405 Employment; Education
 410 Employment; Education
 416Employment; Education
 417 Employment; Education; Holiday; Business; Visiting friends and relatives
 419 Employment; Education
 420 Employment; Education
 421 Employment; Education
 422 Employment; Education
 423 Employment; Education
 424 Employment; Education
 426 Employment; Education
 427 Employment; Education
 428 Employment; Education
 430 Employment; Education

442 Employment; Education
 444 Employment; Education
 456 Employment; Education
 457 Employment; Education; Business; Visiting friends and relatives
 459 Employment; Education
 461 Employment; Education
 462 Employment; Education; Holiday
 470 Employment; Education
 476 Employment; Education
 482 Employment; Education; Business; Visiting friends and relatives
 485 Employment; Education
 500 Employment; Education
 570 Employment; Education
 571 Employment; Education
 572 Employment; Education
 573 Employment; Education
 574 Employment; Education
 575 Employment; Education
 576 Employment; Education
 995 Employment; Education

Visa classes are aggregated into three main groups: short term visitors (students); short term visitors (sponsored visa holders); and short term visitors (other).

To estimate the number of main jobs held by students who short term visitors, the quarterly average employment rate of resident persons attending tertiary education, obtained from the Labour Force Survey, is multiplied by the estimated number of short term student visa holders. The Labour Force Survey data used in the calculation of employed short term students is limited to those persons aged 15-24 years old, who are currently undertaking full-time tertiary education. The method assumes that similar employment rates apply to short term visitors on student visas as for full-time Australian resident tertiary students, and that all short term student visa holders are in the labour force (either employed or unemployed).

To estimate the number of main jobs held by other short term visitors, the quarterly average employment rate for all residents is multiplied by the number of visa holders (other than sponsored visa holders) with working rights. This method assumes that all temporary entrants with a visa that had working rights (other than 400, 457 and 482 visa holders) were in the labour force (either employed or unemployed), and that similar rates of employment for this group apply when compared with the resident population

To estimate the number of main jobs held by short term visitors who are sponsored visa holders, the total number of short term arrivals with this type of visa is used. As these visa types require that the holder remains employed for the duration of the visa, an employment rate of 100% is assumed.

To estimate the number of secondary jobs held by other non-resident short-term visitors, the estimated number of non-resident main job holders (excluding students and sponsored visa holders) is multiplied by the proportion of resident employed persons who hold multiple jobs sourced from the Labour Force Survey. Students and sponsored visa holders are assumed to only hold main jobs, due to the restrictions associated with these types of visa. This method assumes that the same proportion of short term visitors hold multiple jobs as for the resident employed population.

There is a time lag in the estimation of Net Overseas Migration (NOM) data. Consequently, estimates of short term visitors for the latest quarters are extrapolated by applying movements in Overseas Arrivals and Departures (OAD) data to estimates of NOM. The movements are applied after matching visa codes and reasons for journey between the NOM and OAD series.

Time periods from September 1994 to December 2005

OAD and NOM data with both visa type and reason for journey are not available for the entire time series of the Australian Labour Account. For earlier time periods, the following data are available:

- NOM data classified by reason for journey by visa type is available from March 2006
- OAD data classified by reason for journey by visa type is available from September 2004
- OAD data classified by reason for journey only is available from September 1993.

As with the current end of the NOM series, estimates for the periods prior to March 2006 are modelled from OAD data by applying movements with matching visa codes and reasons for journey category to the estimates of March 2006.

The resulting series are aggregated to students, non-students and sponsored visa holders in the same way as for the rest of the time

series.

Disaggregation to industry

Jobs held by short term visitors are disaggregated to industry in the following ways:

- Main jobs held by short term visitors (students) are disaggregated to industry using an underlying Labour Force Survey series of persons aged 15-24 attending full-time educational institutions.
- For main jobs held by other short term visitors, underlying data from Labour Force Survey supplementary surveys which approximates tenuous employment, namely part-time employment with no leave entitlements, are used.
- For main jobs held by short term visitors (sponsored visa holders), data from the Department of Home Affairs on the industry of the employer sponsoring the visa are used to distribute the total to industry division. Division level totals are further disaggregated to subdivision, using the tenuous employment data described above. Data from the Department of Home Affairs are not available prior to the 2005-06 financial year. For time periods prior to this, 2005-06 industry proportions are assumed to apply.
- Data for short term visitors on “working holiday visas” (417 and 462) is distributed to industry using published information on employers of these visa types from the Australian Taxation Office.
- For secondary jobs held by sponsored visa holders) is assumed to apply.

Deduct:

- the number of jobs held by Australian residents living in Australia employed by non-resident enterprises, sourced from underlying Balance of Payments data. As most of the people involved are employed by agencies of foreign governments (consulates, embassies etc.), the deductions are made from ANZSIC subdivision 75 (Public Administration) within Division O (Public Administration and Safety). Although the Labour Force Survey would include people over the age of 15 years in this category, they are not contributing to economic activity within Australian economic territory as measured in the Australian National Accounts.

Calculation of filled jobs (household sources) by industry

The Labour Force Survey collects quarterly data on the industry of the main job held by employed persons. For each employed person, it also collects the number of secondary jobs held (second, third, fourth or more). The Labour Force Survey does not record the industry of secondary jobs. To calculate the number of filled jobs and people employed at an industry level requires the allocation of each secondary job to an industry.

This is done in the Australian Labour Account by first obtaining the total number of multiple job holders and the number of second, third and fourth jobs from the Labour Force Survey. Employed persons who indicate they hold more than four jobs are assumed to hold only four jobs, as no further information on the number of jobs actually held is available. At this stage of compilation, multiple job holders and second, third and fourth jobs are classified by the industry of main job for each employed person.

Data from the ABS Linked Employer Employee Dataset (LEED) are then used to determine the proportions of the industry of employment of second, third and fourth jobs for multiple job holders, and applied to industry of main job Labour Force Survey data. These proportions are extracted as at the end date for each quarter from the LEED, and are updated as new data points become available. Industry proportions from the earliest available LEED are applied to earlier time periods in the Australian Labour Account, and similarly the latest available proportions are applied to subsequent time periods where necessary.

Where relevant, data are sourced from information collected in the Labour Force Survey in the last month of the relevant quarter, and apportioned across the industries using the related quarterly labour force industry data. For example, estimates in the September quarter Australian Labour Account are sourced from September month Labour Force data, which are then distributed across industry divisions from the industry distribution of quarterly data captured in the August Labour Force Survey published in Labour Force, Australia, Detailed, Quarterly.

Sector of Filled Jobs

One commonly used sector classification in labour statistics is the public and private sector classification. In this classification, the public sector includes all government units, such as government departments, non-market non-profit institutions that are controlled and mainly financed by government, and corporations and quasi-corporations that are controlled by government. The private sector refers to enterprises that are not controlled by Commonwealth, state/territory or local governments (that is, any enterprise that is not part of the public sector).

The Australian Labour Account publishes estimates of private and public sector filled jobs. These are compiled by applying proportions from business sources (with data from the Economic Activity Survey representing the private sector, and data from the Survey of Employment and Earnings representing the public sector) to balanced numbers of filled jobs for each industry.

Job sharing

There is currently no household side information available on the number of jobs with job sharing arrangements. As a result, the total number of filled jobs is equivalent to the sum of reported main jobs and secondary jobs, plus scope adjustments. As with the business side, shared jobs on the household side would be counted as many times as there are people engaged in such arrangements.

Annual jobs methods

The Jobs quadrant contains stock data, which are data that measure certain attributes at a point in time. To determine an annual estimate of jobs in this quadrant, an average level is derived using a simple arithmetic average of the four quarterly estimates. Refer to Labour Account Methods for an example of this method.

The annual estimate of jobs is an approximate estimate of the number of jobs at any point in time during the year.

Job vacancies

A job vacancy is a job available for immediate filling on the survey reference date and for which recruitment action has been taken.

Recruitment action includes efforts to fill vacancies by advertising, by on site or online notices, by notifying employment agencies or trade unions and by contacting, interviewing or selecting applicants already registered with the enterprise or organisation.

Estimates of job vacancies exclude:

- jobs not available for immediate filling on the survey reference date;
- jobs for which no recruitment action has been taken;
- jobs which became vacant on the survey date and were filled on the same day;
- jobs of less than one day's duration;
- jobs only available to be filled by internal applicants within an organisation;
- jobs to be filled by employees returning from paid or unpaid leave or after industrial disputes;
- vacancies for work to be carried out by contractors; and
- jobs for which a person has been appointed but has not yet commenced duty.

Total quarterly job vacancies are calculated as:

- the sum of the number of vacant positions reported in the ABS Job Vacancies Survey for the relevant quarterly reference date/month (3rd Friday of February, May, August and November) and published in Job Vacancies, Australia (ABS cat. no. 6354.0); plus
- the number of job advertisements from the Department of Employment, Skills, Small and Family Business Internet Vacancy Index (as at the 1st day of the third month of the reference quarter; i.e. 1 March, 1 June, 1 September, 1 December), for the following Australian and New Zealand Standard Classification of Occupations (ANZSCO) occupation codes: 12 Farmers and Managers; 36 Skilled Animal and Horticultural Workers; and 84 Farm, Forestry and Garden Workers.

Internet Vacancy Index data are added to capture vacancies available in employing enterprises primarily engaged in Agriculture, Forestry and Fishing, which are out of scope of the quarterly ABS Job Vacancies Survey.

Industry detail at the ANZSIC subdivision level is not available directly from either the ABS Job Vacancies Survey or the Department of Employment, Skills, Small and Family Business Internet Vacancy Index, and is modelled in the Australian Labour Account using the following methods:

- For subdivisions within Division A (Agriculture, Forestry and Fishing), information from the Department of Employment, Skills, Small and Family Business Internet Vacancy Index for agricultural occupations at four digit ANZSCO level are aggregated to approximate these ANZSIC subdivisions; and
- For all remaining subdivisions, ANZSIC division level information from the Job Vacancies Survey is disaggregated to subdivision level using data from the Labour Force Survey relating to employees by subdivision (excluding Owner Managers of Unincorporated Enterprises).

Data from the ABS Job Vacancies Survey are available on the current ANZSIC 2006 industry classification from November 2009 onwards, and data on an ANZSIC 1993 basis and the total number of job vacancies are available for earlier time periods. Data for each ANZSIC 2006 industry division for earlier time periods are estimated by applying a concordance between the ANZSIC 1993 and ANZSIC 2006 industry classifications. The known total number of job vacancies is maintained using this approach. Data at the industry division level are then distributed to industry subdivision by applying proportions from the LFS employees (excluding Owner Managers of Unincorporated Enterprises) series.

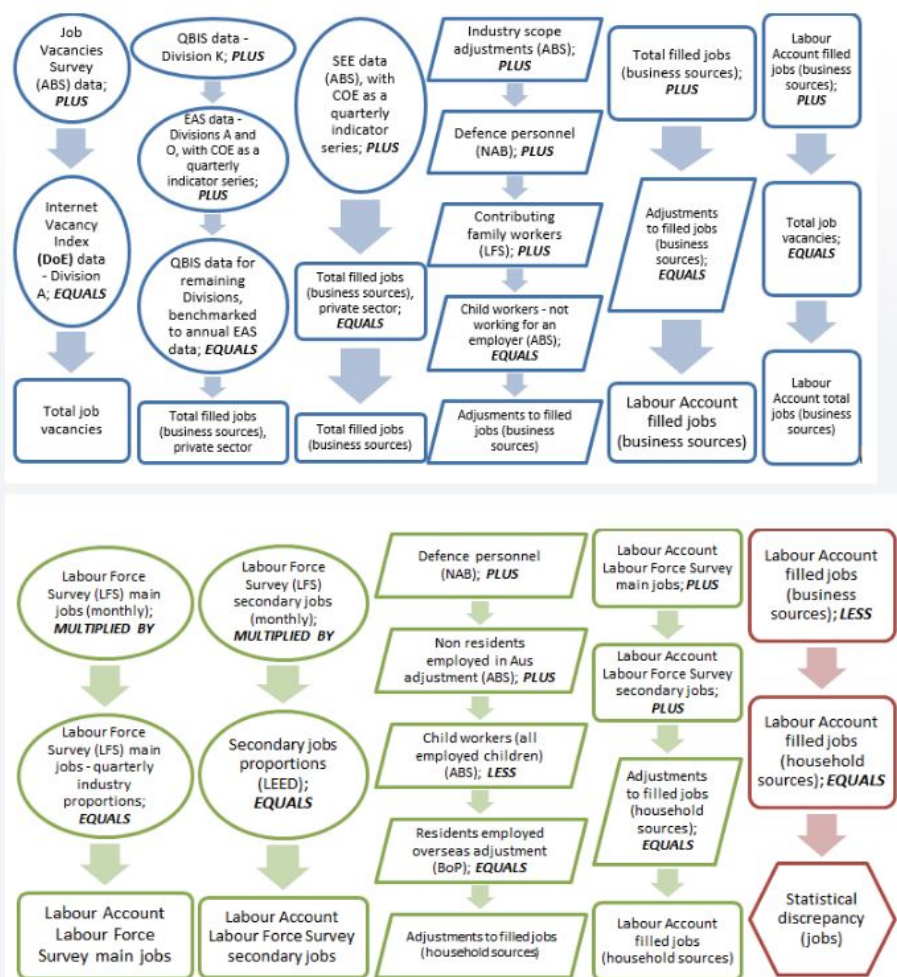
The Job Vacancies Survey was suspended for five periods between August 2008 and August 2009 inclusive, as a result of a series of cuts to the ABS forward work program. The ABS has used econometric modelling techniques using a full-time equivalent flow series to estimate total job vacancies for the missing period. It should be noted that the modelled data are not part of the Job Vacancies Survey series and are not available in the related publication or the Australian Labour Account. However, modelled data for the gap period have been used in the production of seasonally adjusted and trend time series data.

Job vacancies for each industry for the period September 2008 and September 2009 have been estimated by applying the movement from the LFS number of employees (excluding Owner Managers of Unincorporated Enterprises) to subdivision level job vacancies data on an ANZSIC 2006 basis from December 2009. These industry estimates are constrained to the modelled total number of job vacancies for this period.

Data from the Department of Employment, Skills, Small and Family Business are available from January 2006 onwards. Data for earlier time periods are estimated by applying the movement in the number of employees (excluding Owner Managers of Unincorporated Enterprises) for each Agriculture subdivision from the LFS to the 2006 level.

Jobs quadrant calculations

Jobs quadrant sources and calculations

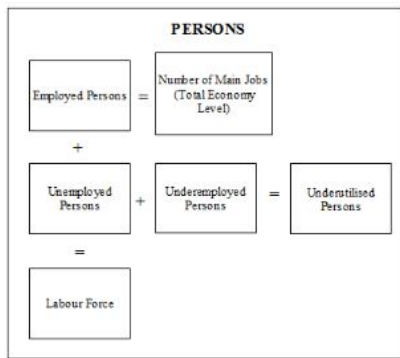


The diagram shows that: Job Vacancy Survey (ABS) data plus Internet Vacancy Index (DoE) data - Div A equals Total job vacancies QBIS data (Div K) plus EAS data (Div A and O with COE as quarterly indicator series) plus QBIS data (for remaining Divs, benchmarked to annual EAS data) equals Total filled jobs (business sources), private sector SEE data (with COE as quarterly indicator series) plus Total filled jobs (business sources) equals Total filled jobs (business sources) Industry scope adjustments (ABS) plus Defence personnel (NAB) plus Contributing family workers (LFS) plus Child workers (not working for an employer) equals Adjustments to filled jobs (business sources) Total filled jobs (business sources) plus Adjustments to filled jobs (business sources) equals Labour Account filled jobs (business sources) Labour Account filled jobs (business sources) plus Total job vacancies equals Labour Account total jobs (business sources) Labour Force Survey (LFS) main jobs (monthly) multiplied by Labour Force Survey (LFS) main jobs (quarterly industry proportions) equals Labour Account Labour Force Survey main jobs Labour Force Survey (LFS) secondary jobs (monthly) multiplied by secondary jobs proportions (LEED) equals Labour Account Labour Force Survey secondary jobs Defence personnel (NAB) plus Non residents employed in Australia adjustment (ABS) plus Child workers (all employed children) less Residents employed overseas adjustment (BoP) equals Adjustments to filled jobs (household surveys) Labour Account Labour Force Survey main jobs plus Labour Account Labour Force Survey secondary jobs plus Adjustments to filled jobs (household surveys) equals Labour Account filled jobs (household surveys) Labour Account filled jobs (business sources) less Labour Account filled jobs (household sources) equals Statistical discrepancy (jobs)

Persons quadrant

The Persons quadrant provides statistics on employed people, people looking for and available for employment (unemployed people), and underemployed people.

Persons quadrant



The diagram shows that: Employed persons equals Number of main jobs (Total economy level). Unemployed persons plus Underemployed persons equals Underutilised persons. Employed persons plus Unemployed persons equals Labour Force.

Persons concepts

The official measure of the population of Australia is based on the concept of usual residence. It refers to all people, regardless of nationality, citizenship or legal status, who usually live in Australia, with the exception of foreign diplomatic personnel and their families.

The Australian Labour Account uses a practical application of the '12/16' rule to establish usual resident status for non-resident visa holders with working rights. A person is regarded as a usual resident if they have been (or expect to be) residing in Australia for a period of 12 months or more. This 12 month period does not have to be continuous and is measured over a 16 month period. For more information on the '12/16 month rule' methodology, see the [Technical Note in Migration, Australia, 2008-09 \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/Previousproducts/3412.0Technical%20Note12008-09?opendocument&tabname=Notes&prodno=3412.0&issue=2008-09&num=&view=\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/Previousproducts/3412.0Technical%20Note12008-09?opendocument&tabname=Notes&prodno=3412.0&issue=2008-09&num=&view=).

The scope of the population in the Australian Labour Account includes all persons who contribute to Australian economic activity, irrespective of age.

Persons sources

Source data for quarterly and industry estimates of persons

Labour statistics represented in the Persons quadrant are mostly sourced from estimates calculated from the monthly Labour Force Survey. Data from the monthly Labour Force Survey are released in two stages: Labour Force, Australia, and Labour Force, Australia, Detailed. Labour Force Survey data are supplemented with defence force information, child workers information and information on non-residents.

Data from the ABS Linked Employer Employee Dataset (LEED) are used to determine industry of employment of secondary job holders, and applied to Labour Force Survey data to calculate total jobs in each industry. This information is used to adjust the Labour Force Survey estimate of employed persons in each industry, by excluding multiple job holding within the same industry from the total number of filled jobs.

The table below summarises data sources used in compiling quarterly and industry estimates of persons.

Source data	Use in compiling quarterly data
Labour Force, Australia and Labour Force, Australia, Detailed	Used to compile estimates of employed persons, unemployed persons, underemployed persons, not in the labour force and civilian population
Defence force information (National Accounts)	Used to estimate employed defence personnel.
Child Employment, Australia, 2006	Used to estimate employed children.
Migration, Australia and Overseas Arrivals and Departures, Australia	Used to estimate short-term non-residents working in Australia.
Balance of Payments	Used to estimate employed Australian residents living in Australia employed by overseas companies/business entities.
Australian Demographic Statistics	Used for the total estimated resident population.

Source data for annual estimates of persons

The same source data are used in compiling annual estimates in the Persons quadrant.

Persons methods

The Persons quadrant provides data on the number of employed, unemployed and underemployed persons for each quarter. Persons statistics are compiled for all industries (at both the division and subdivision level) and for the economy as a whole. Unless otherwise stated, the methods described apply to both levels of aggregation.

Labour Account employed persons

Similar adjustments to those made in compiling the Jobs quadrant are made to adjust the employed persons estimate from the Labour Force Survey to align with 2008 SNA production and residence concepts. These include calculating estimates for:

- permanent defence force personnel;
- employed persons under 15 years of age (child workers);
- non-residents employed in Australia by Australian businesses; and
- Australian residents employed working overseas.

At an industry level, similar assumptions are made with respect to multiple job holding for these groups as for employed persons generally, with the exception of the following groups:

- permanent defence forces, whose employment conditions are presumed to exclude secondary jobs;
- short term arrival students and sponsored visa holders are assumed to only hold main jobs, due to the restrictions associated with these types of visa; and
- employed children under 15 years, who are also assumed to not hold secondary jobs.

Please refer to the Jobs Quadrant Methods for more detail regarding these adjustments.

Similar to the Jobs quadrant, the Persons quadrant, where relevant, uses data sourced from information collected in the Labour Force Survey in the last month of the relevant quarter, and apportions this across the industries using the related quarterly labour force industry data. For example, estimates in the September quarter labour account are sourced from September month Labour Force data, which are then distributed across industry divisions from the industry distribution of quarterly data captured in the August Labour Force Survey published in Labour Force, Australia, Detailed.

Calculation of employed persons by industry

At an industry level, the number of employed persons is the sum of those holding main jobs in the industry, plus those holding secondary jobs after adjusting for double counting (i.e. for persons holding multiple jobs in the same industry). The Labour Force Survey captures data quarterly on the industry of the main job held by employed persons. For each employed person, it also records the number of secondary jobs held (second, third, fourth or more). The Labour Force Survey does not record the industry of secondary jobs.

Data from the ABS Linked Employer Employee Dataset (LEED) are then used to determine the proportions of the industry of employment of second, third and fourth jobs for multiple job holders, and applied to industry of main job Labour Force Survey data. These proportions are used to allocate the relevant quarterly Labour Force Survey secondary job holdings to each industry, to estimate the total number of filled jobs in each industry.

These proportions are extracted as at the end date for each quarter from the LEED, and are updated as new data points become available. Industry proportions from the earliest available LEED are applied to earlier time periods in the Australian Labour Account, and similarly the latest available proportions are applied to subsequent time periods where necessary.

To estimate the number of people employed in each industry, instances where the industry of second job is the same as the industry of main job are identified. These jobs are removed to derive a count of the number of additional people employed in each industry, and added to LFS main job data.

The Labour Force Survey provides an estimate of employed persons in each industry of main job. The Australian Labour Account produces the total number of people employed in each industry from an industry perspective. As a result, the sum of employed persons in the Australian Labour Account across industry divisions does not equal the total number of people employed in the whole economy.

The purpose of adjusting the Labour Force Survey number of people employed in each industry of main job is to provide information on the total number of people employed in each industry in a time series. This could be used to assess training programs or policy changes targeting a particular industry, to provide a more realistic picture of the number of people who may be impacted by any such change.

Multiple Job Holders

The Labour Force Survey identifies multiple job holders as employed persons who, during the reference week, worked in more than one job and that was not the result of changing jobs. Multiple job holding is the main reason why estimates of employment from the Labour Force Survey cannot be equated to estimates of jobs. Also, under the Labour Force Survey, industry classification for multiple job holders is based on main job, with this main industry identified using hours actually worked.

In the Linked Employer Employee Dataset (LEED), multiple job holders are persons who have two or more concurrent jobs at any point during the financial year. Industry information is available for each individual job.

The Australian Labour Account incorporates both Labour Force Survey and LEED data, and can use this information to provide data on the number of multiple job holders. This is distinct from the number of secondary jobs for each industry, which is presented in the Jobs quadrant.

Estimates of multiple job holders in the Australian Labour Account are compiled by applying proportions from business/ administrative

data sources (the LEED) to balanced numbers of main jobs for each industry, while controlling to the proportion of multiple job holding at the total economy level taken from the Labour Force Survey.

Additional estimates of persons

The Persons quadrant includes additional related estimates at both total economy and industry levels for:

- Unemployed Persons;
- Underemployed Persons;
- Underutilised Persons; and
- Persons not in the Labour Force (total economy only).

It should be noted that industry estimates for the unemployed population are based on industry of last job worked (within the past two years) from the Labour Force Survey, and do not necessarily equate to the industries in which the unemployed are currently seeking work, nor do they include those who have never held a job previously. As such, care should be exercised when interpreting estimates of unemployed persons (and therefore underutilised persons and the total labour force) on an industry basis.

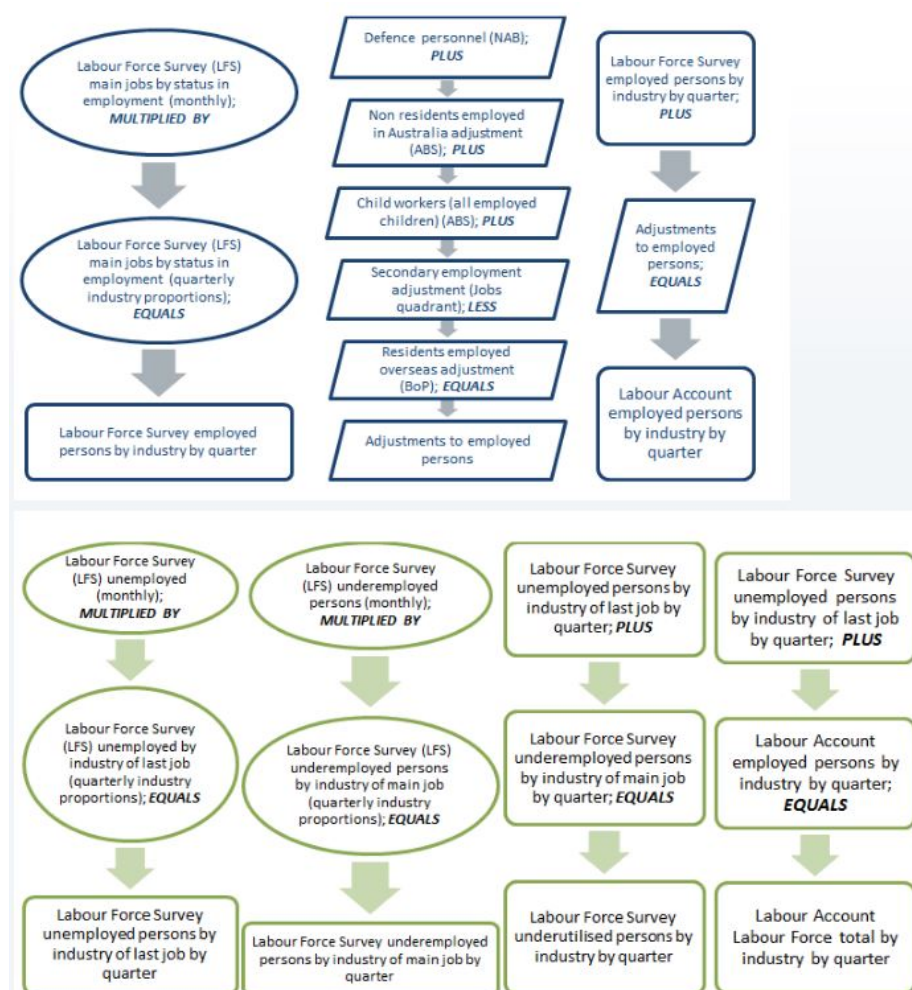
Annual estimates of persons

The Persons quadrant contains stock data, which are data that measure certain attributes at a point in time. To determine an annual estimate of persons in this quadrant, an average level is derived using a simple arithmetic average of the four quarterly estimates. Refer to Labour Account Methods for an example of this method.

The annual estimate of employed persons is an approximate estimate of the number of persons employed at any point in time during the year.

Persons quadrant calculations

Persons quadrant sources and calculations



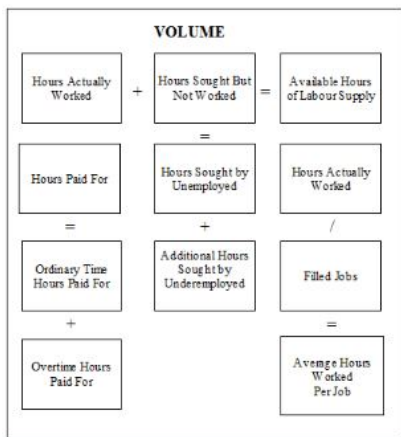
The diagram shows that: Labour Force Survey (LFS) main jobs by status in employment (monthly) multiplied by Labour Force Survey (LFS) main jobs by status in employment (quarterly industry proportions) equals Labour Force Survey employed persons by industry by quarter. Defence personnel (NAB) plus Non residents employed in Australia adjustment (ABS) plus Child workers (all employed children) plus Secondary employment (Jobs quadrant) less Residents employed overseas adjustment (BoP) equals Adjustments to employed persons.

Labour Force Survey (LFS) employed persons by industry by quarter plus Adjustments to employed persons equals Labour Account employed persons by industry by quarter. Labour Force Survey (LFS) unemployed (monthly) multiplied by Labour Force Survey (LFS) unemployed by industry of last job (quarterly industry proportions) equals Labour Force Survey unemployed persons by industry of last job by quarter. Labour Force Survey (LFS) Underemployed (monthly) multiplied by Labour Force Survey (LFS) underemployed by industry of main job (quarterly industry proportions) equals Labour Force Survey underemployed persons by industry of main job by quarter. Labour Force Survey unemployed persons by industry of last job by quarter plus Labour Force Survey underemployed persons by industry of main job by quarter equals Labour Force Survey underutilised persons by industry by quarter. Labour Force Survey unemployed persons by industry of last job by quarter plus Labour Account employed persons by industry by quarter equals Labour Account Labour Force total by industry by quarter.

Hours quadrant

The Hours (Labour Volume) quadrant describes the relationship between the hours of labour that are supplied by individuals, and the hours of labour that are used or demanded by businesses. These data have a direct link to Australian National Accounts and productivity statistics.

Hours quadrant



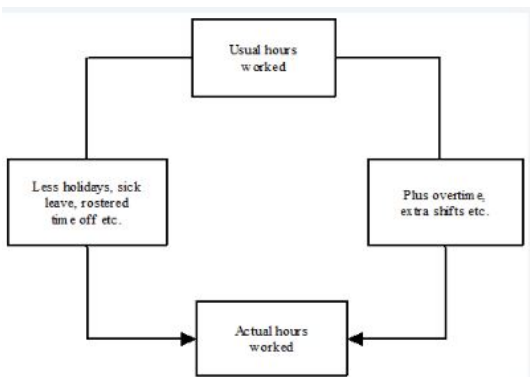
The diagram shows that: Hours actually worked plus Hours sought but not worked equals Available hours of labour supply. Hours paid for equals Ordinary time hours paid for plus Overtime hours paid for. Hours sought but not worked equals Hours sought by unemployed plus Additional hours sought by underemployed. Hours actually worked divided by Filled jobs equals Average hours worked per job.

Hours concepts

Labour volume is expressed as hours worked, and has been defined in International Labour Organisation (ILO) conventions in terms of the time when (paid) employees were at the disposal of an employer; that is, when available to receive work orders from an employer or person in authority, with hours worked covering all jobs. During such periods of availability, workers are expected to be ready to work if work is possible, requested or necessary. This general concept is made meaningful for the self-employed if it is taken to mean time when the self-employed are available to do their work, such as being at the disposal of clients, ready to receive purchase orders or available to make sales, etc. Further information is available in the ILO Resolution concerning the measurement of working time (Eighteenth International Conference of Labour Statisticians, 2008).

Measuring the levels and trends of hours worked for different groups of employed persons is important in order to monitor working and living conditions, as well as analysing economic cycles. Information on hours of work enables various analytical insights such as: classification of employed persons into full-time and part-time status; the identification of underemployed persons; and the creation of aggregate monthly hours worked estimates. The general notion of hours of work encompasses a number of related concepts: hours usually worked; hours actually worked; hours paid for; and normal hours of work.

Usual hours worked and actual hours worked



The diagram shows that Usual hours worked less Holidays, sick leave, rostered time off etc. plus Overtime, extra shifts etc. equals Actual hours worked.

Hours usually worked

Hours usually worked is the typical number of hours worked in a job for a short reference period (such as one week) that is representative of a longer reference period (e.g. a month, quarter, season or year). Usual hours may differ from actual hours worked at a given time if employed persons are away from work due to illness, vacation, strike, a change of job or other reasons, or are at work for more hours than normal due to overtime, extra shifts and so on (ILO, Surveys of Economically Active Population, Ch.5).

Hours actually worked

International resolutions relating to actual hours worked adopted by the Eighteenth International Conference of Labour Statisticians (ICLS) in 2008 refer to wage and salaried employees. There are no international recommendations relating to actual hours worked for all categories of the employed population. However the ILO, in its manual Surveys of Economically Active Population, Employment, Unemployment and Underemployment, suggests that actual hours worked in a given job should be defined to cover all types of employment in labour force surveys. Hours actually worked is the time spent in a job for the performance of activities that contribute to the production of goods and services during a specified short or long reference period.

According to the ILO resolution, actual hours of work measured within the 2008 SNA production boundary includes all time spent directly on, and in relation to, productive activities; down time; and resting time such as:

- time spent in addition to hours worked during normal periods of work (including overtime);
- time spent at the place of work on activities such as the preparation of the workplace, repairs and maintenance, preparation and cleaning of tools, and the preparation of receipts, time sheets and reports;
- time spent at the place of work waiting or standing by due to machinery or process breakdown, accident, lack of supplies or power or internet access, etc.; and
- time corresponding to short rest periods (resting time) including tea and coffee breaks or prayer breaks.

Excluded are:

- hours paid for but not worked such as paid annual leave, public holidays or paid sick leave;
- meal breaks; and
- in respect of paid employment, time spent on travel to and from work when no productive activity for the job is performed (even when paid by the employer).

Monthly hours worked in all jobs

Monthly hours worked in all jobs is a measure of the total number of hours worked by employed persons in a calendar month. Monthly hours worked in all jobs are modelled estimates.

Seasonally adjusted monthly hours worked in all jobs estimates are produced by combining two series.

The first series is the seasonally adjusted actual hours worked in the reference week, adjusted for holiday timing. These estimates provide an indication of movements across months.

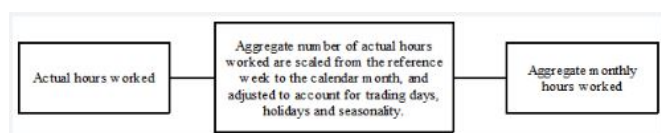
The second series is an annual benchmark series containing original estimates of actual hours worked in each financial year. The annual actual hours worked original estimates are calculated by determining the actual hours worked for each week of the financial year. As actual hours worked are only collected in respect of the reference week of the Labour Force Survey, actual hours worked for weeks not covered by the Labour Force Survey are imputed based on the actual hours worked for the adjacent reference weeks. The imputation accounts for, amongst other things, the effect of public holidays on hours worked; that is, it accounts for holidays that occur in the reference week of the Labour Force Survey as well as holidays that occur in weeks other than the reference week.

These two series are then combined to produce the seasonally adjusted monthly hours worked in all jobs series. A trend series is also subsequently produced. This approach ensures that:

- The level of the monthly hours worked in all jobs (seasonally adjusted) series is consistent with the level of the annual benchmarks; and
- The movements in the series are consistent with the movements in the seasonally adjusted actual hours worked in the reference week series.

Estimates of monthly hours worked in all jobs are available from the Labour Force Survey. For more information on monthly hours worked in all jobs, refer to [Information Paper: Expansion of Hours Worked Estimates from the Labour Force Survey \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6290.0.55.001\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6290.0.55.001).

Actual and aggregate hours worked



The diagram shows that the Aggregate number of actual hours worked are scaled from the reference week to the calendar month, and

adjusted to account for trading days, holidays and seasonality to give Aggregate monthly hours worked.

Hours paid for

Hours paid for applies to a paid-employment job and to a self-employment job paid on the basis of time units. For a paid-employment job, hours paid for is the time for which payment has been received from the employer (at normal rates, in cash or in kind) during a specified short or long reference period, regardless of whether the hours were actually worked or not.

Hours paid for:

- includes time paid but not worked such as paid annual leave, paid public holidays and certain absences such as paid sick leave; and
- excludes time worked but not paid by the employer, such as unpaid overtime, and absences that are not paid by the employer, such as unpaid educational leave or maternity leave that is paid through transfers by government from social security systems.

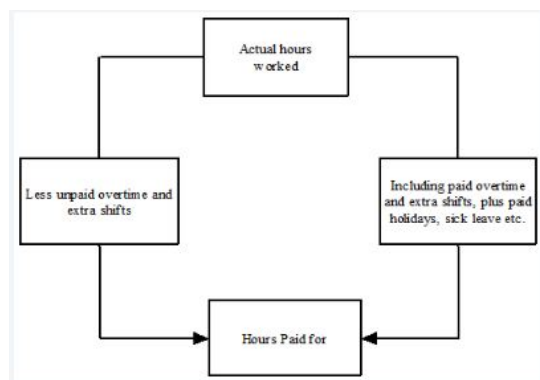
As such, hours paid for will differ from the number of hours actually worked if an employee works more or less hours than their paid hours. Hours paid for will also differ from usual hours in some cases, for example if an employee performs long hours in some weeks to have rostered days or weeks off.

Measures of hours paid for are collected from business payroll records in the ABS Survey of Employee Earnings and Hours (EEH). The EEH also collects information on the following components:

- ordinary time hours paid for - defined as the award, standard or agreed hours of work paid for at the ordinary rate. Ordinary hours paid for include: stand-by or reporting time hours, which are part of standard hours of work, and hours of paid annual leave, paid sick leave and long service leave taken during the reference period (ASNA, 23.167). Ordinary time hours paid for at penalty rates (e.g. for shift work) are not converted to their ordinary time equivalent; and
- overtime hours paid for - defined as hours paid for in excess of award, standard or agreed hours of work, at both standard and penalty rates.

Applying the concept in practice, the Australian Labour Account makes no estimate for hours paid and not worked, or hours worked but not paid for, as this is currently a known data gap.

Actual hours worked and hours paid for



The diagram shows that Actual hours worked less unpaid overtime and extra shifts and including Paid overtime and extra shifts, plus paid holidays, sick leave etc. equals Hours paid for.

Normal hours of work

Normal hours of work is defined in a 2008 ICLS resolution as 'the hours fixed by or in pursuance of laws or regulations, collective agreements or arbitral awards to be performed in specified paid-employment jobs over a specified reference period, such as per day, week, month or year (within the 2008 SNA production boundary). Normal hours of work may also apply to a job in self-employment when the hours are in accordance with the hours fixed for all jobs in a specific industry or occupation (such as for drivers to ensure public safety)' (ICLS 2008, 13(1)).

Measures of normal hours of work are not produced by the ABS. However, the concept is used to assist in allocating respondents in the full-time/part-time status classification in ABS business surveys.

Hours sources

Source data for quarterly and industry estimates of labour volume

All statistics used to populate the Labour Volume quadrant are derived based on calculations involving the average weekly hours paid for rate sourced from underlying data from the publication Employee Earnings and Hours, Australia. The Survey of Employee Earnings and Hours (EEH) is conducted every two years.

No adjustments have been made to the average weekly hours paid for rate, as the necessary adjustments to correct for survey data scope limitations are included in the filled jobs estimate used in the calculations to derive hours paid for estimates. See the Jobs section for an explanation of the scope adjustments made to filled jobs estimates.

The number of hours actually worked, on the household side, is sourced from underlying data from Labour Force, Australia. The Australian National Accounts uses the same underlying source data to derive a quarterly hours actually worked estimate, while also including an estimate for hours worked by defence force personnel. The same adjustment for defence hours is used in the Australian Labour Account, ensuring consistency across both accounts, as well as creating a direct link to the labour productivity statistics published in the Australian System of National Accounts.

For the Australian Labour Account, the hours actually worked data are further adjusted for the number of hours worked by child workers, non-residents living in Australia employed by Australian companies, and Australian residents living in Australia employed by overseas companies.

The number of hours sought by unemployed persons is sourced from Labour Force, Australia, Detailed from 2014 onwards. For earlier periods, a derived average number of hours sought per unemployed person is applied to the relevant number of unemployed people. A similar methodology is applied to derive the number of additional hours sought by underemployed persons.

The table below summarises data sources used in compiling quarterly estimates in the hours quadrant.

Source data	Use in compiling quarterly data
Employee Earnings and Hours, Australia	Used in compiling estimates of hours paid for.
Labour Force, Australia	Used in compiling estimates of hours actually worked.
Hours worked by defence personnel (Australian National Accounts)	Used in compiling estimates of hours actually worked.
Labour Force, Australia, Detailed	Used in compiling estimates of hours sought by unemployed persons, and additional hours sought by underemployed persons.
Child Employment, Australia, 2006	Used to estimate the number of hours worked by employed children.
Migration, Australia and Overseas Arrivals and Departures, Australia	Used to estimate hours worked by out of scope non-residents working in Australia.
Balance of Payments	Used to estimate hours worked by out of scope Australian residents living in Australia employed by overseas companies/business entities.

Source data for annual estimates of labour volume

Source data for the annual estimates of labour volume are the same as those described above for quarterly estimates.

Hours methods

Methods for the compilation of quarterly estimates of labour volume

Hours actually worked

Hours actually worked are collected in the Labour Force Survey. Respondents report the hours worked in their main job and the hours worked in all their jobs in the survey reference week. The aggregate number of hours worked by all employed persons in all jobs (including secondary employment) and main jobs, classified by industry of main job, is calculated for the reference week.

Hours actually worked during the reference week are used to derive modelled estimates of total hours worked by industry of main job across a quarter. The results are published in Labour Force, Australia, and are combined with an estimate of hours worked by permanent defence personnel in the hours actually worked series published in quarterly Australian National Accounts data.

In the hours worked series published in Labour Force, Australia and quarterly Australian National Accounts data, hours worked are allocated to industry on the basis of an employed persons industry of main job. The Australian Labour Account, while maintaining consistency with the total number of hours worked published in Labour Force, Australia, reallocates hours worked among industries to account for instances of secondary job holding.

Permanent defence force personnel hours are sourced from quarterly Australian National Accounts data and are allocated to Australian and New Zealand Standard Industrial Classification (ANZSIC) subdivision 76 (Defence) within Public Administration and Safety (Division O), as conditions of employment assume that secondary jobs are not allowed.

There is no single source of information to determine the industry allocation of hours worked in secondary jobs. Estimates of hours worked in secondary jobs by industry of secondary job are determined by combining information from the Labour Force Survey (LFS), and the Linked Employer-Employee Dataset (LEED). The method used is detailed below:

Step 1: The aggregate hours worked estimates from the LFS are apportioned between hours worked in main jobs and hours worked in secondary jobs, based on LFS estimates of hours actually worked in the reference week of the mid-quarter month. The calculations are performed by industry subdivision of main job, so produce final estimates of hours worked in main job. However, the industry classification of hours worked in secondary jobs is still determined by the industry of main job.

Step 2: The industry classification of those hours worked in secondary jobs is then rederived by the industry of secondary job according to the following process:

- Take the total hours worked in secondary jobs from step 1. As noted, these series are available by industry of main job.

- For each industry of main job m, take the hours worked in secondary jobs (by workers whose main job is in industry m) and multiply it by the proportion of job holders who hold a secondary job in industry s, to get an estimate of hours worked in secondary jobs in industry s by workers whose main job is in industry m. These proportions are taken from the LEED.
- Sum the values from step 2b to get estimates of all hours worked in secondary jobs by industry of secondary job.

The exception to the above is for estimates of hours worked by permanent defence force personnel, which are sourced from quarterly Australian National Accounts data. All hours worked by those personnel are allocated to Australian and New Zealand Standard Industrial Classification (ANZSIC) subdivision 76 (Defence) within Public Administration and Safety (Division O), as conditions of employment assume that secondary jobs are not allowed.

Scope adjustments

Hours actually worked in all jobs derived from the Labour Force Survey are adjusted to align with the production and residency boundaries of the Australian System of National Accounts (ASNA) by including estimates of hours worked by child workers, non-residents living in Australia employed by Australian resident enterprises and members of the permanent defence forces, and excluding hours worked by Australian residents employed by non-resident enterprises. The estimated numbers of jobs held by persons in each category are taken from the Jobs quadrant.

Estimates for the number of hours actually worked by non-residents living in Australia employed by Australian resident enterprises are based on visa type. For short term students, the number of hours is capped at twenty hours per week as this is a work condition of student visas during university/school semesters. For other short term arrivals (excluding students), an average hours actually worked per job is estimated at half (50%) of the hours actually worked by the general resident population. While half is a crude estimate, it is assumed that non-residents would work less than the average hours worked by residents, to account for a holidaying component of their trip to Australia. Quarterly hours actually worked by Australian residents living in Australia employed by non-resident enterprises are also based on the quarterly average hours worked per job estimates.

Hours worked by child workers are derived based on data from the 2006 Survey of Child Workers. Quarterly hours actually worked by child workers are calculated by multiplying the relevant quarterly estimate of employed children by the average number of hours worked from the 2006 Survey of Child Workers.

Hours worked by permanent defence force personnel are not specifically adjusted for in the Australian Labour Account, as the underlying Australian National Accounts estimates used in the Australian Labour Account include an adjustment for hours worked by permanent defence personnel. The Australian National Accounts estimate of hours worked assumes that permanent defence personnel work the same number of hours in their jobs as average hours worked in main jobs by the general population.

Hours worked by the adjusted scope populations are allocated to industry as described in the table below.

Scope adjustment	Allocation to industry
Australian residents working in Australia employed by non-resident enterprises	Hours worked are deducted from the Public Administration and Safety (ANZSIC Division O) industry, as most people in this category are locally engaged by foreign embassies, consulates and so on.
Students on short term visas	Hours allocated in the same proportions as the calculated estimates of main jobs held by short term students, i.e. based on resident full-time tertiary students aged 15-24 years.
Short term working visa holders	Hours allocated in the same proportions as the calculated estimates of main and secondary jobs held by short term non-students.
Child workers under 15 years	Hours allocated in the same proportions as the calculated estimates of employed children, i.e. based on 15 year old employed persons from the LFS. Child workers under 15 years are assumed to hold only main jobs.

Hours sought but not worked

Hours sought but not worked are estimated by aggregating hours sought by the unemployed and additional hours preferred by the underemployed. Hours sought by unemployed persons are the hours unemployed persons could work if they were employed. Additional hours preferred by underemployed persons are the potential hours of employed people that are not fully utilised. It includes people employed part-time who want to and are available to work more hours, as well as people employed full-time who worked part-time hours in the survey reference week for economic reasons.

Both series are sourced from Labour Force, Australia, Detailed, Quarterly. Input data from the Labour Force Survey are not available prior to 2014. For earlier time periods, an average hours sought based on data from 2014 to 2017 is multiplied by the number of unemployed and underemployed persons. Data are further multiplied by 13 to derive a quarterly estimate from the weekly data representative of the Labour Force Survey reference week.

It should be noted that industry estimates for the unemployed population (and therefore the hours sought by those unemployed persons) are based on industry of last job worked (within the past two years) from the Labour Force Survey. This does not necessarily equate to the industries in which unemployed persons are currently seeking work, nor do they include those who have never held a job previously. Similarly, it is assumed that any additional hours sought by the underemployed are sought in the same industry as the main job of each underemployed person. As such, care should be exercised when interpreting estimates of hours sought on an industry basis.

No adjustments have been made to align the Labour Force Survey hours sought with the ASNA residency and production boundaries, as there is no reliable information to derive estimates of additional hours of work sought by short term working visa holders. It is also assumed that defence force personnel and child workers are fully employed.

Available hours of labour supply

Available hours of labour supply are the total number of hours for which people in the labour force are prepared to make themselves available for work. It is the sum of hours actually worked in all jobs, including adjustments for scope, and hours sought but not worked.

Hours paid for

Total hours paid for, at both an industry and total economy level, is calculated by adding quarterly estimates of ordinary and overtime hours paid. In addition, ordinary time hours paid is calculated separately for Owner Managers of Unincorporated Enterprises to other Status in Employment types.

Hours paid for – Owner Managers of Unincorporated Enterprises

To calculate hours paid for Owner Managers of Unincorporated Enterprises, it is assumed that hours paid for in this group are equivalent to the number of hours actually worked, as they would generally have no entitlement to any form of paid leave.

As such, the total number of hours paid for Owner Managers of Unincorporated Enterprises are calculated for each industry by taking the average number of hours actually worked in the reference week by this group from the Labour Force Survey, and multiplying the weekly average by the number of Owner Managers of Unincorporated Enterprises in that industry. The result is then further multiplied by 13 weeks to derive a quarterly estimate. These figures, estimated at an industry level, are summed to produce a 'whole of economy' total.

Hours paid for – Other Status in Employment types

In calculating hours paid for other Status in Employment types, average weekly ordinary time hours paid and average weekly overtime hours paid for each industry are derived from underlying data from the EEH. To calculate both overtime and ordinary hours paid for, average weekly measures are multiplied by the number of filled jobs in each industry, less Owner Managers of Unincorporated Enterprises. The filled jobs data are taken from the Jobs quadrant, while the number of Owner Managers of Unincorporated Enterprises is taken from the Persons quadrant. As the survey data reflects a 'typical week', quarterly estimates of total ordinary and overtime hours paid for are derived by multiplying the average weekly data by 13 weeks. Similar to the hours paid for Owner Managers of Unincorporated Enterprises, figures estimated at an industry level are summed to produce a 'whole of economy' total.

Prior to 2014, the two average weekly hours series for ordinary time hours paid and paid overtime were only available for non-managerial employees (refer to Labour Payments Concepts for a definition). From the 2014 release of the publication Employee Earnings and Hours, Australia (ABS cat. no. 6306.0), these series are available for all employees, which includes managerial employees where there is a link between pay and hours worked. The all employees series are used in Australian Labour Account hours paid for estimates where available. Internal analysis conducted during the development of the Australian Labour Account showed that the all employees series did not differ noticeably from the non-managerial employees series, therefore no adjustments have been made for scope for years prior to 2014.

In addition, as the EEH is a biennial survey, average weekly hours paid data for years where EEH survey data are not available are estimated as the average of the two neighbouring years. For example, average weekly hours paid data for 2013 are calculated as the average of EEH data for 2012 and 2014. EEH data are also not available on the current industry classification basis prior to 2008. Data for earlier time periods have been estimated by matching current and historical industry classifications, as much as possible, at the industry subdivision level.

As Division A is out of scope of the Survey of Employee Earnings and Hours, the calculation of hours paid for the Agriculture Forestry and Fishing Industry (ANZSIC Division A) applies the average hours paid for Division I (Transport, Postal and Warehousing).

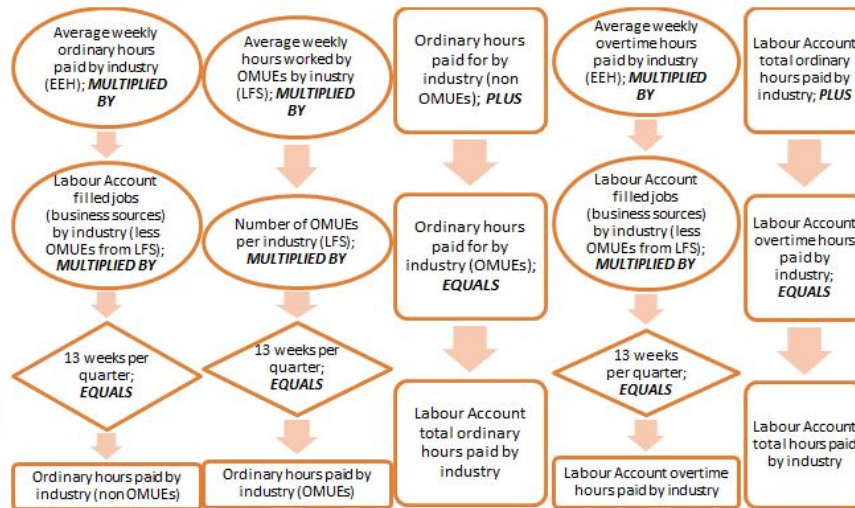
Annual labour volume methods

As all data contained in the Labour Volume quadrant are flow data, which represent a measure of activity over a given period, data across time periods are additive. Therefore, annual data in the Labour Volume quadrant are derived as the sum of the four quarterly estimates.

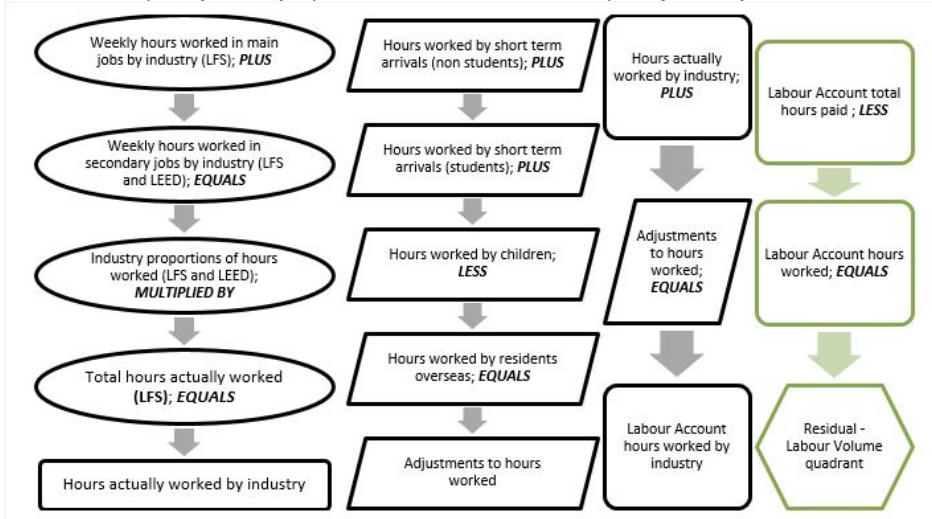
It should be noted that the Labour Volume quadrant includes derived measures such as Average hours worked per job and Average hours worked per Labour Account employed person. These are calculated using a flow as the numerator (e.g. Hours actually worked), divided by a stock for the denominator (e.g. Filled jobs). Where these data are presented in annual terms, caution must be exercised when comparing this result with other estimates measured at the same point in time. These data are intended for comparison across time and industries within the Australian Labour Account, and to provide a link between the Jobs and Labour Volume quadrants.

Hours quadrant calculations

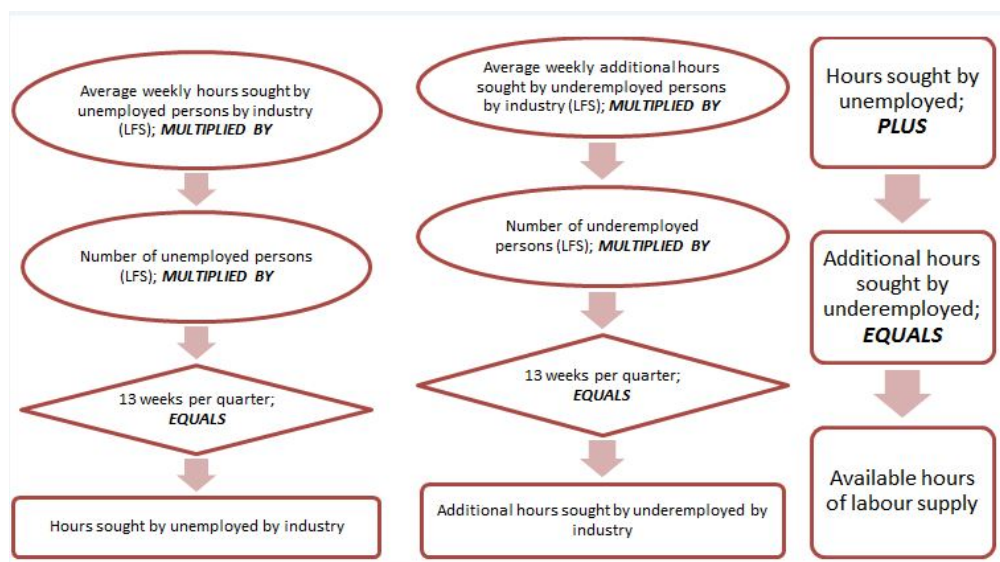
Hours quadrant sources and calculations



The diagram shows that: Average weekly ordinary hours paid for by industry (EEH) multiplied by 13 weeks per quarter equals Ordinary hours paid by industry (non OMUEs). Average weekly hours worked by OMUEs by industry (LFS) multiplied by Number of OMUEs per industry (LFS) multiplied by 13 weeks per quarter equals Ordinary hours paid by industry (OMUEs). Ordinary hours paid by industry (non OMUEs) plus Ordinary hours paid by industry (OMUEs) equals Labour Account total ordinary hours paid by industry. Average weekly overtime hours paid by industry (EEH) multiplied by Labour Account filled jobs (business sources) by industry (less OMUEs from LFS) multiplied by 13 weeks per quarter equals Labour Account overtime hours paid by industry. Labour Account total ordinary hours paid by industry plus Labour Account overtime hours paid by industry equals Labour Account total hours paid by industry.



The diagram shows that: Weekly hours worked in main jobs by industry (LFS) plus Weekly hours worked in secondary jobs by industry (LFS and LEED) equals Industry proportions of hours worked (LFS and LEED) multiplied by Total hours actually worked (LFS) equals Hours actually worked by industry. Hours worked by short-term arrivals (non students) plus Hours worked by short-term arrivals (students) plus hours worked by children less Hours worked by residents overseas equals Adjustment to hours worked. Hours actually worked by industry plus Adjustment to hours worked equals Labour Account hours worked by industry. Labour Account total hours paid less Labour Account hours worked equals Residual - Hours quadrant.

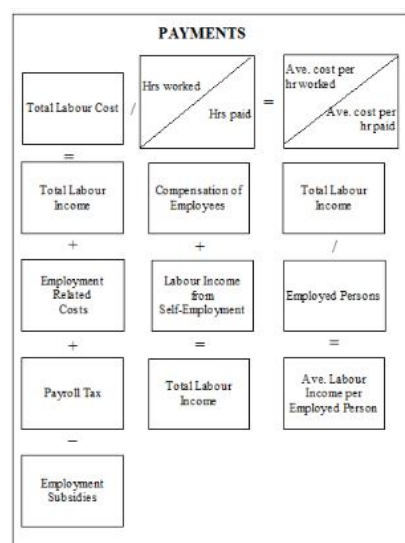


The diagram shows that: Average weekly hours sought by unemployed persons by industry (LFS) multiplied by Number of unemployed persons multiplied by 13 weeks per quarter equals Hours sought by unemployed by industry. Average weekly additional hours sought by underemployed persons by industry (LFS) multiplied by Number of underemployed persons multiplied by 13 weeks per quarter equals Additional hours sought by underemployed by industry. Hours sought by unemployed plus Additional hours sought by underemployed equals Available hours of labour supply.

Payments quadrant

The Labour Payments quadrant accounts for the costs incurred by enterprises in employing labour and the incomes received by people from its provision.

Payments quadrant



The diagram shows that: Total Labour cost divided by Hours worked equals Average cost per hour worked. Total Labour cost divided by Hours paid equals Average cost per hour paid. Total Labour cost equals Total labour income plus Employment related costs plus Payroll tax less Employment subsidies. Compensation of employees plus Labour income from self-employment equals Total labour income. Total labour income divided by Employed persons equals Average labour income per employed person.

Payment concepts

The conceptual framework for statistical measures of employee remuneration in Australia (in the context of the broader concept of labour costs) are discussed in the [Earnings \(/statistics/concepts-sources-methods/labour-statistics-concepts-sources-and-methods/concepts-and-sources/earnings\)](#) chapter. The narrowest concept outlined in the international guidelines is that of 'Earnings'. Concepts of 'Wages and salaries', 'Employee income', 'Compensation of Employees' and 'Labour costs' all include and extend upon the concept of 'Earnings'.

The statistical measure of labour costs is based on the concept of labour as a cost to the employer and relates to:

- all cash and in-kind payments of wage and salaries to employees;
- all contributions by employers in respect of their employees to social security, private pension, casualty insurance, life insurance and similar schemes; and
- all other costs borne by employers in the employment of labour that are not related to employee compensation (such as costs of training, welfare services to employees, payroll taxes etc.).

Measures of labour costs should be net of any subsidies, rebates or allowances from governments for wage and salary payments to employees, or for other labour costs borne by employers.

The definition of labour costs from the 1966 International Conference of Labour Statisticians, paragraph 39 is ‘...remuneration for work performed, payments in respect of time paid for but not worked, bonuses and gratuities, the cost of food, drink and other payments in kind, cost of workers' housing borne by employers, employers' social security expenditures, cost to the employer for vocational training, welfare services and miscellaneous items, such as transport of workers, work clothes and recruitment together with taxes...’.

Payments sources

Source data for quarterly estimates of labour payments

Labour payments data are primarily sourced from underlying data from two ABS National Accounts publications: Australian System of National Accounts and the Australian National Accounts: National Income, Expenditure and Product. Please refer to Chapter 11 of the [Australian System of National Accounts: Concepts, Sources and Methods \(statistics/detailed-methodology-information/concepts-sources-methods/australian-system-national-accounts-concepts-sources-and-methods/latest-release\)](#) for details on how data are compiled for National Accounts.

Data components of other labour related costs to employers are sourced from the Australian National Accounts: Input-Output Tables, Product Details and underlying information from ABS Supply-Use tables.

The table below summarises data sources used in compiling quarterly estimates in the Labour Payments quadrant.

Source data	Use in compiling quarterly data
Australian System of National Accounts	Used in compiling estimates of labour income from self-employment.
Australian National Accounts: National Income, Expenditure and Product	Used in compiling estimates of Compensation of employees, payroll taxes and labour income from self-employment.
Australian National Accounts: Input-Output Tables, Product Details	Used in compiling estimates of training costs and recruitment costs.
ABS Supply-Use tables	Used in compiling estimates of employment subsidies, training costs and recruitment costs.
Government Finance Statistics, Australia	Used in compiling estimates of employment subsidies.
Job Vacancies, Australia	Used in compiling quarterly estimates of Recruitment costs.
Business Indicators, Australia	Used in compiling quarterly estimates of Training costs.

Source data for annual estimates of labour payments

Source data for the annual estimates of labour payments are the same as those described above for quarterly estimates.

Payments methods

Methods for the compilation of quarterly and industry estimates of labour payments

Total labour income

Total labour income is the sum of:

- Compensation of employees; and
- Labour income from self-employment.

Total labour costs

Total labour costs is the sum of:

- Total labour income; and
- Other employment related costs.

Estimates of Compensation of employees at a total economy and industry division level are derived from underlying Australian National Accounts data. Division level data from the Australian National Accounts is further disaggregated to industry subdivision, using Compensation of employees information from the ABS Supply-Use tables for most industries. For some industries, the Supply-Use industries are more aggregated than industry subdivision. For these industries, information from the annual Economic Activity Survey or the proportion of filled jobs from business sources is used to disaggregate data to industry subdivision. One exception is Division S (Other Services), which uses information relating to earnings in all jobs from the household Characteristics of Employment Survey to disaggregate data to industry subdivision, as subdivision 96 (Private Households Employing Staff) is out of scope of all business collections.

Quarterly Compensation of Employees data are not available prior to September 2002. For earlier time periods, data at industry division level are backcast by applying movement in gross earnings from Wage and Salary Earners, Australia to the September 2002 level. These data relate to both the public and private sectors for each industry division except for Division A (Agriculture, Forestry and Fishing), which is limited to the public sector only. As the data are also on a historical industry classification basis, conversion factors (based on annual Australian National Accounts Compensation of Employees benchmark data) are also applied to approximate the current industry

classification. These backcast quarterly data are then benchmarked to published annual levels.

Labour income from self-employment is an estimate of the share of Gross Mixed Income (GMI) attributable to the provision of labour. GMI is the surplus or deficit accruing from production by unincorporated enterprises that includes both the return on labour and return on capital.

The calculation of the labour share of GMI on an annual basis for each industry follows the method described in compiling Productivity Statistics outlined in Chapter 19 (Productivity Measures) of the [Australian System of National Accounts: Concepts, Sources and Methods \(/statistics/concepts-sources-methods/australian-system-national-accounts-concepts-sources-and-methods/2020-21\)](#). This method assumes that self-employed proprietors receive the same average compensation per hour as wage and salary earners, and can be summarised as comprising the following steps:

1. Average hourly income of wage and salary earners in each industry is calculated by dividing Compensation of Employees by the estimated number of hours worked in all jobs by employees in the industry (excluding the self-employed).
2. This hourly rate is then multiplied by the estimated number of hours worked by self-employed persons (OMUEs) whose main job is classified to the industry. This information is derived by expanding the average number of hours worked in the reference weeks recorded in the Labour Force Survey by the number of weeks in the quarter and aggregating for the year.
3. This estimate is then multiplied by a scaling factor, to constrain to total industry GMI reported in the National Accounts. The scaling factor represents the ratio of the sum of the independently calculated labour and capital shares of GMI, for each industry, to the independently calculated estimate of total industry GMI reported in the National Accounts. This difference can arise from the use of different sources and methods to derive estimates of returns to labour and capital, to the method used by national accounts in calculating total GMI.
4. As productivity statistics are not compiled for industries with significant “non-market” components, no GMI scaling factor is applied to estimated self-employed labour income for Division P (Education and Training) and Division Q (Health Care and Social Assistance).
5. No GMI is estimated for Division D (Electricity, Gas, Water and Waste Services), Division K (Financial and Insurance Services) and Division O (Public Administration and Safety), as there are no owner managed unincorporated enterprises (OMUEs) classified to these industries.

The Australian Labour Account calculates quarterly labour income from self-employment for each industry division by taking the scaled labour share of GMI from underlying Australian National Accounts productivity data, as calculated using the steps described above, and applying this share to the total level of quarterly GMI for each industry division. This approach ensures consistency between Australian Labour Account estimates of labour income from self-employment and Australian National Accounts GMI data.

As productivity statistics are not compiled for Division P (Education and Training) and Division Q (Health Care and Social Assistance), the scaled labour share of GMI for Division M (Professional, Scientific and Technical Services) is applied to total quarterly GMI for these industries. In addition, the scaled labour share of GMI for Division I (Transport, Postal and Warehousing) is used to represent Division A (Agriculture, Forestry and Fishing) while the scaled labour share of GMI for Division A is further investigated.

As industry productivity statistics are only compiled annually, the same annual scaled labour share of GMI is applied to each quarterly GMI measure for the financial year.

To disaggregate estimates of labour income from self-employment for each industry division to subdivision level, Gross Operating Surplus information from the ABS Supply-Use tables is used for most industries. For some industries, the Supply-Use industries are more aggregated than industry subdivision. For these industries, information from the annual Economic Activity Survey is used.

Quarterly GMI data are not available prior to September 2001. For earlier time periods, data at the industry division level are backcast by applying movements in original Gross Value Added (chain volumes) to the September 2001 level. These backcast data are then benchmarked to annual scaled GMI. For Division P (Education and Training) and Division Q (Health Care and Social Assistance), labour income from self-employment is backcast directly by applying movements in Gross Value Added (chain volumes).

Other employment costs

Other employment costs are the sum of

- Employers payroll taxes;
- Payment for recruitment services;
- Training costs; less
- Employment subsidies.

Employers payroll taxes

Estimates for employers' payroll taxes at industry division level are taken from underlying Australian National Accounts estimates. Division level data from the Australian National Accounts is further disaggregated to industry subdivision, using Compensation of Employees information from the ABS Supply-Use tables for most industries. For some industries, the Supply-Use industries are more aggregated than industry subdivision. For these industries, information from the annual Economic Activity Survey is used.

Payment for Recruitment services and Training costs

Estimates of annual total expenditure on recruitment services are calculated as the sum of Intermediate Use (purchase price) and Government Final Consumption Expenditure sourced from the Australian National Accounts: Input-Output Tables, Product Details for Input-Output Product Classification (IOPC) 72110010 (Employment placement and recruitment services). Total quarterly job vacancies from Job Vacancies, Australia (ABS cat. no. 6354.0) are used as a quarterly indicator series to distribute this annual total across the four financial year quarters.

Training Costs are similarly derived and sourced from the Input-Output tables, using the following IOPC codes:

- IOPC 81010010 Technical, vocational and other non-tertiary education services;
- IOPC 81020010 Tertiary higher education services (including undergraduate and postgraduate);
- IOPC 82120010 Arts education services (excluding vocational);
- IOPC 82190011 Adult, community and other education services; and
- IOPC 82200010 Education support services.

Total wages and salaries for Division P (Education and Training) from Business Indicators, Australia are used as a quarterly indicator series to distribute this annual total across the four financial year quarters. As these data are not available prior to March 2001, data for earlier time periods are backcast by applying movements in private sector gross earnings from Wage and Salary Earners, Australia to the March 2001 level.

As Input-Output tables are only available infrequently for earlier periods and with a significant time lag for more recent periods, estimates of total annual expenditure on recruitment services and training costs for the intervening and out years are compiled using underlying data from the Supply-Use tables, based on applying movements in the following Supply-Use Product Classification (SUPC) codes:

- SUPC 72005 Employment placement and recruitment services;
- SUPC 80205 Technical, vocational and tertiary education services; and
- SUPC 80310 Arts, adult and other education services.

Supply-Use tables also provide proportions used to allocate total quarterly expenditure on recruitment services and training costs to industry subdivision. These proportions are based on total intermediate use of these products for each Supply-Use industry, with information from the Economic Activity Survey used for those industries where Supply-Use industries are more aggregated than industry subdivision.

Employment subsidies

Employment subsidies are payments made by government, typically to employers. They may be based on the size of the total workforce, the employment of particular types of people such as those who are physically handicapped or who have been unemployed for long periods. These subsidies may also be intended to cover some or all of the costs of training schemes organised or financed by employers.

Information on employment subsidies is sourced from data provided by the Department of Finance to compile estimates for the publication Government Finance Statistics, Australia – specifically, data relating to “labour market assistance to jobseekers”. As data for the current year employment subsidies estimate is not available at the time of publication of the Australian Labour Account, annual data for the current year are modelled based on previous years’ movements.

Typically, only annual data are available for estimates of employment subsidies. Therefore, quarterly estimates of employment subsidies are derived by evenly distributing the annual estimate across the four quarters. However, additional subsidies payable for a specific purpose may be added in targeted quarters to specific industries.

Employment subsidies data from Government Finance Statistics, Australia are not available prior to 2010-11. Estimates for earlier time periods are modelled based on movements in a similar GFS data item, namely “Commonwealth subsidies paid to other”, where “other” refers to other than public trading enterprises.

To allocate employment subsidies to industry subdivision, data from the Supply-Use tables for subsidies on production by Supply-Use industry are used to derive industry proportions, with information from the Economic Activity Survey used for those industries where Supply-Use industries are more aggregated than industry subdivision.

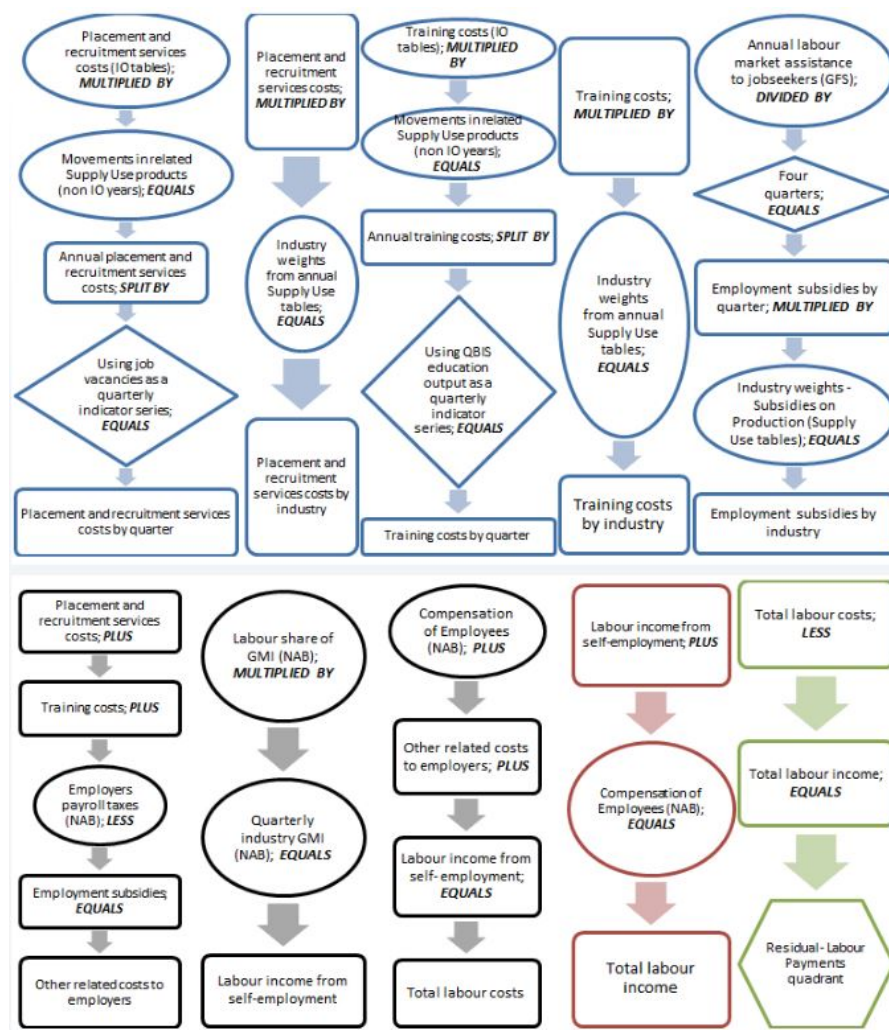
Method for the compilation of annual estimates of labour payments

As all data contained in the Labour Payments quadrant are flow data, which represent a measure of activity over a given period, data across time periods are additive. Therefore, annual data in the Labour Payments quadrant are derived as the sum of the four quarterly estimates.

It should be noted that the Labour Payments quadrant includes derived measures such as Average labour Income per employed Person. These are calculated using a flow as the numerator (e.g. Labour income), divided by a stock for the denominator (e.g. Labour Account employed persons). Where these data are presented in annual terms, caution must be exercised when comparing this result with other estimates measured at the same point in time, such as estimates of Average Weekly Earnings. This data is intended for comparison across time and industries within the Australian Labour Account, and to provide a link between the Persons and Labour Payments quadrants.

Payments quadrant calculations

Payments quadrant sources and calculations



The diagram shows that: Placement and recruitment services costs (IO tables) multiplied by Movements in related supply use products (non 10 years) equals Annual placement and recruitment services split by Using job vacancies as a quarterly indicator series equals Placement and recruitment services costs by quarter. Placement and recruitment services costs multiplied by Industry weights from annual supply use tables equals Placement and recruitment services costs by industry. Training costs (IO tables) multiplied by Movements in related supply use products (non 10 years) equals Annual training costs split by Using QBIS education outputs as a quarterly quarterly indicator series equals Training costs by quarter. Training costs multiplied by Industry weights from annual supply use tables equals Training costs by industry. Annual labour market assistance to jobseekers (GFS) divided by Four quarters equals Employment subsidies by quarter multiplied by Industry weights - subsidies on production (supply use tables) equals Employment subsidies by industry. Placement and recruitment services costs plus Training costs plus Employers payroll taxes (NAB) less Employment subsidies equals Other related costs to employers. Labour share of GMI (NAB) multiplied by Quarterly industry GMI (NAB) equals Labour income from self-employment. Compensation of employees (NAB) plus Other related costs to employers plus Labour income from self-employment equals Total labour costs. Labour income from self-employment plus Compensation of employees (NAB) equals Total labour income. Total labour costs less Total labour income equals Residual - Payments quadrant.

Glossary

A

Active steps taken to find work

Active steps taken by unemployed persons in their search for work during the current period of unemployment include:

- wrote, phoned or applied in person to an employer for work;
- answered an advertisement for a job in a newspaper;
- answered an advertisement for a job on the Internet;
- answered an advertisement for a job on noticeboards;
- had an interview;
- contacted friends or relatives;
- advertised or tendered for work;
- registered with a Job Services Australia provider; or
- registered with any other employment agency.

Actively looked for work

Actively looked for work includes:

- written, telephoned or applied to an employer for work;
- had an interview with an employer for work;
- answered an advertisement for a job;
- checked or registered with an employment agency;
- taken steps to purchase or start your own business;
- advertised or tendered for work; and
- contacted friends or relatives in order to obtain work.

Actual hours of work

Actual hours of work refers to a specified reference period (e.g. a week) and includes:

- hours actually worked during normal periods of work;
- time spent in addition to hours worked during normal periods of work (including overtime);
- time spent at the place of work on activities such as the preparation of the workplace, repairs and maintenance, preparation and cleaning of tools, and the preparation of receipts, time sheets and reports;
- time spent at the place of work waiting or standing by due to machinery or process breakdown, accident, lack of supplies, power or internet access, etc.;
- time corresponding to short rest periods (resting time) including tea and coffee breaks or prayer breaks;
- travel time connected to work (excluding commuting time); and
- training and skills enhancement related to the job or employer.

Excluded are:

- hours paid for but not worked, such as paid annual leave, public holidays or paid sick leave;
- meal breaks (e.g. lunch breaks);
- paid and unpaid time 'on call';
- time spent on travel to and from work when no productive activity for the job is performed (e.g. commuting time); and
- time off during working hours to attend outside educational activities, even if it is authorised, e.g. those not connected to the job or employer.

For multiple job holders the LFS collects a separate measure of actual hours worked in main job and in all jobs.

Adult employees

Adult employees are those employees 21 years of age or over and those employees who, although under 21 years of age, are paid at the full adult rate for their occupation.

Adult rate

Payment at the full rate stipulated in an award, agreement or the minimum wage order in the relevant jurisdiction.

Age of youngest child

Age of the youngest child, 12 years and under, in the household.

Agreement to work flexible hours

An agreement that is either in writing or otherwise. A written agreement can be in the form of, but not limited to, an individual written agreement between an employer and employee, or a Collective Agreement or Certified Agreement (CA) made directly between an employer and a group of employees.

All jobs

Employed persons may have more than one job. All jobs data items are about all the work that an employed person undertook during the reference week, not only the work that they undertook in their main job. A person's main job is the job in which they usually work the most number of hours.

Applied for workers' compensation

To have formally applied for workers' compensation by completing an application for compensation.

Apprentice

An apprentice is a person who has entered into a legal contract (called a training agreement or contract of training) with an employer, to serve a period of training for the purpose of attaining tradesperson status in a recognised trade. Apprentices and trainees are identified by their answer to a question specifically pertaining to the Australian Apprenticeship Scheme.

Apprentice or trainee rate

Payment at a rate stipulated for apprentices or trainees in an award, agreement or the minimum wage order in the relevant jurisdiction.

Attending full-time education

Persons aged 15-24 years enrolled at secondary or high school or enrolled as a full-time student at a Technical and Further Education (TAFE) college, university, or other educational institution in the reference week.

Attending school

Persons aged 15-19 years enrolled at secondary or high school in the reference week.

Attending tertiary educational institution full-time

Persons aged 15-24 years enrolled full-time at a TAFE college, university, or other educational institution in the reference week, except those persons aged 15-19 years who were still attending school.

Australian citizen

Being an Australian citizen formalises a person's membership of the Australian community. It entitles a person to live permanently in Australia, hold an Australian passport and do such things as vote to elect Australia's governments, stand for parliament, work in the Public Service and serve in the armed forces. A person may acquire Australian citizenship in a number of ways, for example, by birth, adoption, descent, resumption or granting of Australian citizenship (naturalisation). Migrants no longer require a visa once citizenship is granted.

Available to start work

Refers to employed or unemployed people who were available to start work with more hours either in the reference week, or in the four weeks subsequent to the interview.

Available to start work with more hours

Employed people who usually worked 0-34 hours per week in all jobs and were available to start work with more hours in the reference week or within four weeks.

Available to start work within four weeks

People who were available to start work within four weeks or, for people with children aged 12 years and under, could start work within four weeks if suitable child care was available.

Average (mean) earnings

The amount obtained by dividing the total earnings of a group (e.g. full-time employees) by the number of employees in that group.

Average weekly cash earnings

Average weekly cash earnings represents average gross (before tax) earnings of employees, inclusive of salary sacrifice. Average weekly cash earnings differ from average weekly earnings by the average weekly amount salary sacrificed.

Average weekly earnings

Average weekly earnings statistics represent average gross (before tax) earnings of employees and do not relate to average award rates or to the earnings of the 'average person'. Estimates of average weekly earnings are derived by dividing estimates of weekly total earnings by estimates of number of employees.

Award only

Awards are legally enforceable determinations made by federal or state industrial tribunals that set the terms of employment (pay and/or conditions), usually in a particular industry or occupation.

An award may be the sole mechanism used to set the pay and/or conditions for an employee or group of employees, or may be used in conjunction with an individual or collective agreement. Employees are classified to the Award only category if they are paid at the rate of pay specified in the award, and are not paid more than that rate of pay.

B

Bachelor Degree or higher

Includes Bachelor Degree, Graduate Diploma, Graduate Certificate and Postgraduate Degree.

Balance of state/territory

Comprises the balance of each state/territory not included in Capital City. See Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas.

Bonuses

Payments made to a job occupant that are in addition to regular wages and salaries and which generally relate to the job occupant's, or the organisations', performance. In the WPI, the term 'bonuses' refers to bonuses and commissions.

Born in Australia

Includes persons born in Australia, Norfolk Island and Australian External Territories.

C

Capital city

Refers to Greater Capital City Statistical Areas (GCCSA) as defined by the ASGS. The GCCSAs represent the socio-economic extent of each of the eight State and Territory capital cities. The whole of the ACT is included in the GCCSA. See Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas.

Cash earnings

Remuneration paid to employees on a regular and frequent basis (quarterly or more frequently) for time worked or work done, and for time not worked such as recreation and other types of leave. Cash earnings (inclusive of amounts salary sacrificed) are gross amounts, that is, before tax and other items (e.g. superannuation) are deducted.

Cash wages and salaries

Remuneration for time worked or work done and for time not worked, such as recreation and other types of paid leave. Comprises regular and irregular payments, including salary sacrificed amounts. Wages and salaries in cash are gross amounts, that is, before tax and other items (e.g. superannuation) are deducted.

Casual employees

Casual employees usually receive a higher rate of pay to compensate for lack of permanency and leave entitlements.

Cause of Dispute

Cause of dispute statistics relate to the reported main cause of stoppage of work and not necessarily all causes that may have been responsible for the stoppage of work. For these reasons, the statistics do not reflect the relative importance of all causes of disputes as perceived by both employers and employees. The causes are classified from information supplied by employers and according to standards determined by the International Labour Organisation.

Disputes are initially classified according to whether a dispute occurred during a process of workplace/enterprise bargaining. A process of workplace/enterprise bargaining refers to the negotiations that take place between an employer and their employees (or their representatives), in reaching an agreement over pay and employment conditions.

Disputes not related to a process of workplace/enterprise bargaining include:

- disputes relating to award negotiations; and
- disputes relating to the content or application of an existing agreement (and do not seek to amend or terminate the agreement).

Disputes are then further classified according to the main cause of the dispute, as follows:

Enterprise Bargaining (EB) related:

- Remuneration: Disputes relating to wages and other forms of remuneration, e.g. increase/decrease in wages, allowances, entitlements and superannuation.
- Employment conditions: Disputes relating to hours of work, leave, non-remuneration related benefits, and other general employment conditions, e.g. increase/decrease in hours, distribution of hours and holiday and leave provisions.
- Other EB related: Causes other than Remuneration or Employment conditions, including job security and other causes relating to a process of workplace/enterprise bargaining, e.g. pattern bargaining strikes, and disputes where employees refuse to enter into enterprise bargaining negotiations.

Non-EB related:

- Remuneration: As above.
- Employment conditions: As above.
- Health and safety: Disputes concerning physical working conditions, safety issues and workers' compensation provisions, e.g. accidents, protective clothing and equipment, first aid services, uncomfortable working conditions, employee amenities, shortage or poor distribution of equipment or material, condition of equipment, and arduous physical tasks.
- Job security: Disputes concerning issues relating to job security, e.g. retrenchment of employees, downsizing, restructuring, use of contractors, outsourcing, re-classification of the workforce, and market conditions within the relevant industry.
- Managerial policy: Disputes relating to the decisions and policies of line managers, e.g. disciplinary matters, suspensions, personal disagreement, discrimination, decisions that impact upon work and family issues, docking of pay, fines, production limits or quotas,

principles of promotion or filling positions, and work practices.

- Union issues: Disputes concerning the alleged anti-union attitude of the employer, inter-union and intra-union disputes (e.g. demarcation disputes), sympathy stoppages in support of employees in another industry, and recognition of union activities.
- Other non-EB related: Disputes that cannot be ascribed to any other category, e.g. political protests.

Certificate

Includes Certificate I/II/III/IV and Certificate not further defined.

Certificate n.f.d. (Certificate not further defined)

Survey responses are coded to Certificate not further defined (n.f.d.) when there is not enough information to code them to Certificate I, II, III or IV in the Australian Standard Classification of Education, Level of education classification.

Change in work

Employees were considered to have had some change in work if they had been with their current employer for one year or more at the previous survey date and reported that, in the 12 months to current survey date, they had:

- been promoted;
- transferred to a different position;
- changed usual hours worked; or
- changed occupation.

Child

A person of any age who is a natural, adopted, step, or foster son or daughter of a couple or lone parent, usually resident in the same household. A child is also any individual under 15 years, usually resident in the household, who forms a parent-child relationship with another member of the household. This includes otherwise related children under 15 years and unrelated children under 15 years.

In order to be classified as a child, the person can have no partner or child of his or her own usually resident in the household.

There are three types of child identified in the 'Relationship in household' classification:

- Child under 15 years
- Dependent student
- Non-dependent child

The differentiation of children into these three types is based upon the dependency criterion and is designed to identify families with different structures and needs. Dependency as used in these standards refers to economic dependency and is applied only to the population of people who could be described as 'children'. It is thus not intended to measure an aged or disabled person's dependency.

Children who work for themselves

A child who operates his or her own unincorporated economic enterprise or engages independently in a profession or trade. Informal work for relatives or neighbours for payment where the child has solicited the employment is included.

Civilian population aged 15 years and over

All usual residents of Australia aged 15 years and over except members of the permanent defence forces, certain diplomatic personnel of overseas governments customarily excluded from census and estimated population counts, overseas residents in Australia, and members of non-Australian defence forces (and their dependants) stationed in Australia.

Collective agreement

An agreement between an employer (or group of employers) and a group of employees (or one or more unions or employee associations representing the employees). A collective agreement sets the terms of employment (pay and/or conditions) for a group of employees, and is usually registered with a Federal or State industrial tribunal or authority.

Employees are classified to the Collective agreement category if they had the main part of their pay set by a collective agreement (registered or unregistered) or enterprise award.

Commonwealth government All public sector units controlled by the Australian Government are classified to the Commonwealth Level of Government. This includes government units controlled by the Australian Government, public financial corporations controlled by the Australian Government and Public non-financial corporations controlled by the Australian Government. Those bodies run jointly by the Commonwealth government and State governments are classified to Commonwealth.

Completed

'Completed' a qualification means having successfully passed all of the requirements for the qualification.

Composite Estimation

The estimation methodology used in the Labour Force Survey. Composite Estimation uses sample responses from nearby months as well as from the reference month to derive estimates for the reference month. This approach achieves gains in efficiency by exploiting the high similarity between the responses provided by the same respondent in previous months. For details see Information Paper: Forthcoming Changes to Labour Force Statistics, 2007 (cat. no. 6292.0).

Considered job to be casual

Employees who considered their job to be casual, regardless of any entitlements that they may receive.

Continuous duration with current employer/business

The length of the current period of employment people had with their employer or in their own business. The length of time includes periods of paid leave, unpaid leave or strike.

Contributing family workers

Persons who work without pay in an economic enterprise operated by a relative.

Country of birth

Country of birth is classified according to the Standard Australian Classification of Countries (SACC), Second Edition.

Couple relationship

A couple relationship is defined as two people usually residing in the same household who share a social, economic and emotional bond usually associated with marriage and who consider their relationship to be a marriage or marriage-like union. This relationship is identified by the presence of a registered marriage or de facto marriage.

A 'couple relationship' includes same-sex couples.

Current job

A job that a person was working in during the reference week which had lasted or was likely to last for a period of two weeks or more.

Current main job

The job that a person was working in during the reference week in which most hours were usually worked.

Current other job

Refers to a current job other than the current main job.

Currently economically active

A person is considered to be economically active if that person contributes or is available and seeking to contribute to the production of goods and services that fall within the System of National Accounts production boundary. The currently economically active population is equivalent to the total labour force, and consists of the total number of persons defined as employed and unemployed. The currently economically active population is measured during a specified short period of time, and in Australia is based on the concept of usual residency of the civilian population aged 15 years and over.

The currently economically active population excludes:

- people under the age of 15 years;
- permanent members of the defence forces;
- short term visitors to Australia; and
- people not in the labour force.

Currently enrolled in study

Enrolled in a course of formal study for a trade certificate, diploma, degree or any other educational qualification.

D

Data type

Job vacancy estimates are a stock data type, as the number of job vacancies is measured at a point in time.

Days or shifts absent from work

Includes all work hours spent on medical consultation, hospitalisation and rest due to the injury or illness. The days or shifts absent do not have to be consecutive.

Dependant

A dependant is a family member who is either:

- under 15 years of age; or
- aged 15–19 years and attending school or aged 15–24 years and attending a tertiary education institution full-time (i.e. dependent students).

In order to be classified as a dependant, the person must have no partner or child of his/her own usually resident in the household. A separate family in the household is formed in this instance.

Dependent child

Persons aged less than 15 years who have a parent/guardian in the household.

Dependent student

A full-time student aged 15-24 years, living in the same usual residence as his or her natural, step, foster or adoptive parent.

Did not draw a wage or salary

Consists of persons who worked in their own incorporated enterprise only, i.e. Owner managers of incorporated enterprises (OMIEs).

Did not prefer to work more hours

People who said 'no' or 'don't know' when asked 'would you prefer to work more hours than you usually work?'

Did not want a paid job

People who were not classified as employed or unemployed who answered 'no' or 'don't know' when asked if they would like a paid job.

Did not want to work

People who were not classified as employed or unemployed who answered 'no' when asked if they would like a job.

Disability rate

Payment stipulated in Schedule A to the National Minimum Wage Order (or an award or agreement with a specific schedule) for employees with a disability who:

- are unable to perform the range of duties to the competence level required of an employee within the class of work for which the employee is engaged because of the effects of disability on their productive capacity; and
- who meet the impairment criteria for receipt of a Disability Support Pension.

Discouraged job seekers

People with marginal attachment to the labour force who wanted to work and were available to start work within the next four weeks but whose main reason for not actively looking for work was that they believed they would not find a job for any of the following reasons:

- considered to be too young by employers;
- considered to be too old by employers;
- believes ill health or disability discourages employers;
- lacked necessary schooling, training, skills or experience;
- difficulties because of language or ethnic background;
- no jobs in their locality or line of work;
- no jobs in suitable hours; and
- no jobs at all.

Disputes

An industrial dispute is defined as a state of disagreement over an issue or group of issues between an employer and its employees, which results in employees ceasing work. Industrial disputes comprise strikes, which are a withdrawal from work by a group of employees; and lockouts, which are a refusal by an employer or group of employers to permit some or all of their employees to work.

Disputes which ended during the reference period

Disputes which ended during the period encompasses those disputes which:

- started in a previous period and ended in the reference period; and
- began and ended in the reference period.

Disputes which occurred during the reference period

Disputes which occurred during the period encompasses those disputes which:

- started in a previous period and ended in the reference period;
- began and ended in the reference period;

- began in the reference period and continued into the next period; and
- started prior to the reference period and continued past the reference period.

Duration of current main job

Length of time worked in current main job.

Duration of current main job/last job

Length of time worked in current main job/last job.

Duration of current period of insufficient work

For full-time workers who worked fewer than 35 hours in the reference week due to economic reasons, refers to the number of weeks they have been working fewer than 35 hours a week.

For part-time workers who would prefer to work more hours, refers to the number of weeks they have wanted to work more hours.

As periods of insufficient work are recorded in full weeks and rounded down, this results in a slight understatement of duration.

Duration of current period of unemployment

The period of time from when an unemployed person began looking for work until the end of the reference week; or the period of time since an unemployed person last worked in any job for two weeks or more until the end of the reference week; whichever was the shorter period. Brief periods of work (of less than two weeks) since the person began looking for work are disregarded.

Duration of employment in job where most recent work-related injury or illness occurred

Length of time worked in job where most recent work-related injury or illness occurred.

Duration of job search

The current and continuing period of unemployment for persons who are unemployed in the reference week. Duration of job search measures the elapsed number of weeks to the end of the reference week since an unemployed person began looking for work, or since that person last worked, whichever is the shorter. For persons who began looking for work while still employed, it is the period from the time the person last worked to the end of the reference week.

Duration of looking for work before current job

The number of weeks or years that employed persons were looking for work before being offered their current job or starting their own business. For employed persons who had worked before, it includes any time they were looking for work before leaving their previous employer.

E

Earnings

Total employee remuneration during the reference year, regardless of the form of remuneration. This comprises:

- gross wages and salaries; the value of salary sacrificed (excluding fringe benefits tax);
- the un-grossed value of fringe benefits provided by employers through arrangements other than salary sacrifice; and
- severance, termination and redundancy payments.

Gross wages and salaries are net of amounts reimbursed for employees on government employment programs. Workers' compensation payments paid through the payroll and fringe benefits tax paid by employers are excluded from earnings.

Economic reasons

Economic reasons for full-time workers having worked fewer than 35 hours in the reference week are:

- there was no work or not enough work available, e.g. due to material shortages;
- they were stood down; or
- they were on short time.

Educational attainment

Level of highest educational attainment identifies the highest achievement a person has attained in any area of study. It is defined as the highest educational attainment a person has achieved, and is not a measurement of relative importance of different fields of study. For further information please see paragraphs 38 to 41 of the chapter on 'Level of highest educational attainment', Education Variables, 2002.

Educational attendance

Enrolled at secondary or high school or enrolled as a full-time student at a Technical and Further Education (TAFE) college, university, or

other educational institution in the reference week.

Educational institution

Any institution whose primary role is education. Included are schools, higher education establishments, colleges of technical and further education and public and private colleges.

Elapsed years since arrival

The number of years since a person first arrived in Australia with the intention of staying for at least one year.

Applies to persons born overseas only.

Elementary aggregates

The finest aggregations of jobs, in terms of state/territory, sector and industry group, for which expenditure weights are available.

Employed

All persons aged 15 years and over who met one of the following criteria during the reference week:

- Worked for one hour or more for pay, profit, commission or payment in kind, in a job or business or on a farm (employees and owner managers of incorporated or unincorporated enterprises).
- Worked for one hour or more without pay in a family business or on a farm (contributing family workers).
- Were employees who had a job but were not at work and were:
 - away from work for less than four weeks up to the end of the reference week; or
 - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four week period to the end of the reference week; or
 - away from work as a standard work or shift arrangement; or
 - on strike or locked out; or
 - on workers' compensation and expected to return to their job.
- Were owner managers who had a job, business or farm, but were not at work.

Employed full-time

Includes employed persons who usually worked 35 hours or more a week (in all jobs) and those who, although usually working less than 35 hours a week, worked 35 hours or more during the reference week.

Employed part-time

Includes employed persons who usually worked less than 35 hours a week (in all jobs) and either did so during the reference week, or were not at work in the reference week.

Employee job

A job for which the occupant receives remuneration in wages, salary, payment in kind, or piece rates.

Employee

Employees are persons who:

- worked for a public or private employer; and
- received remuneration in wages or salary; or
- are paid a retainer fee by their employer and worked on a commission basis, for tips, piece-rates or payment in kind.

Employees with paid leave entitlements

Employees who were entitled to either paid sick leave or paid holiday leave (or both).

Employees without paid leave entitlements

Employees who were not entitled to, or did not know whether they were entitled to, paid sick and paid holiday leave.

Employer

Organisation with one or more employees.

Employer size

A measure of the size of the business in terms of the number of employees within that business. The employer size reflects the size of the business in a particular state or territory and not necessarily the size of the business Australia-wide.

Employment agency

An employment agency is an organisation which is engaged in personnel search, or selection and placement of people for an employing

organisation. The agency or firm may also be engaged in supply of their own employees to other employers, usually on a short-term basis. (See also labour hire firm).

Employment to population ratio

For any group, the number of employed persons expressed as a percentage of the civilian population in the same group.

Engaged in employment and/or study

Persons fully engaged in employment and/or study include:

- persons participating in full-time formal study (including school); and/or
- persons in full-time employment; and/or
- persons participating in part-time formal study (including school) and in part-time employment.

Persons partially engaged in employment and/or study are participating in part-time formal study or in part-time employment only.

The engagement rate is derived as the proportion of those either fully or partially engaged in employment and/or study as a proportion of the population aged 15 years and over.

Enrolled

Refers to persons registered for a course of formal study in the particular reference period (e.g. survey month, or previous calendar year).

Estimated resident population (ERP)

Estimated resident population (ERP) is Australia's official measure of the population of Australia and is based on the concept of usual residence. It refers to all people, regardless of nationality, citizenship or legal status, who usually live in Australia, with the exception of foreign diplomatic personnel and their families. It includes usual residents who are overseas for fewer than 12 months. It excludes overseas visitors who are in Australia for fewer than 12 months. Refer to Australian Demographic Statistics.

Expectations of future employment with current employer or business

Whether or not an employed person expects to be working for their current employer or in their current business in 12 months' time.

Reasons are provided for those who do not expect to be with their current employer or business in 12 months.

Applicable to employed persons only.

Expenditure weights

A measure of the relative importance of each elementary aggregate, based on employers' total expenditure on wages and salaries.

Expenditure weights are used to combine elementary aggregate indexes into broader level indexes.

F

Family

Two or more people, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering; and who are usually resident in the same household. The basis of a family is formed by identifying the presence of a couple relationship, lone parent-child relationship or other blood relationship. Some households will, therefore, contain more than one family.

Family business or farm

An economic enterprise (e.g. company, partnership or individual) operated solely by a relative of the child.

Family reasons for not actively looking for work

Includes ill health of someone other than themselves, caring for children and other family considerations.

Father

The male parent with dependants and/or children. The relationship between a father and a child/dependant can be formed via a natural, adoptive, step, foster or child dependency relationship.

Field not determined

Field not determined includes inadequately described responses or where no responses were given.

Field of trade

Refers to the occupation of an apprentice or trainee and is classified according to the Australian and New Zealand Standard Classification of Occupations (ANZSCO), First Edition, Revision 1 Unit Group.

Financial assistance

Monetary assistance received from any party to cover medical expenses or income loss, incurred due to their work-related injury or illness.

First job ever held lasting two weeks or more

Refers to employees (excluding OMIEs) who had never worked for two weeks or more before starting their current job.

Fixed-term contract

A contract of employment which specifies that the employment will be terminated on a particular date/event.

Flow estimates

Flow estimates are a measure of activity over a given period. For example, monthly hours worked in all jobs is a measure of the total number of hours worked in a calendar month.

Formal study

Any study being undertaken that will lead to a recognised qualification, issued by a relevant approved body, in recognition that a person has achieved learning outcomes or competencies relevant to identified individual, professional, industry or community needs. This includes study for a school qualification. If the respondent was still attending school, their level of study was recorded as their current year of schooling. If the respondent had left school and was enrolled in formal study, they were asked the level of the qualification.

Former worker

Unemployed persons who have not worked in the last 2 years are categorised as those who have never worked before (looking for first job) or those who last worked 2 or more years ago (former worker).

Fringe benefits

Non-cash benefits, such as goods and services, provided to employees in respect of employment. Examples include use of a work car, a cheap loan, or health insurance costs. These benefits may be provided through salary sacrifice or other arrangements. Fringe benefits tax is payable (by the employer) in respect of most fringe benefits. Employer contributions to superannuation in respect of an employee (including through a salary sacrifice arrangement), when paid to a complying superannuation fund, are not considered to be fringe benefits.

Fringe benefits tax

A tax paid by employers on fringe benefits they provide to their employees, including their employees' family. Exemptions apply to some categories of employers (e.g. certain not-for-profit organisations) and certain benefits (e.g. laptop computers). Estimates of the un-grossed value of fringe benefits (a component of earnings) and fringe benefits tax both relate to the year ended 31 March.

Full-time employees

Full-time employees are permanent, temporary and casual employees who normally work the agreed or award hours for a full-time employee in their occupation and received pay for any part of the reference period. If agreed or award hours do not apply, employees are regarded as full-time if they ordinarily work 35 hours or more per week.

Full-time or part-time status of last job

The perception of people of whether they worked full-time or part-time in their last job.

Full-time preference

People who preferred to work 35 hours or more a week. Full-time preference is derived by applying data collected on respondents' preferred number of hours to those who intended to or might enter the labour force in the next 12 months.

Full-time workers

Employed persons who usually worked 35 hours or more a week (in all jobs) and others who, although usually working fewer than 35 hours a week, worked 35 hours or more during the reference week.

Full-time workers (usual)

Employed people who usually work 35 hours or more a week (in all jobs).

Full-time workers in main job

People who were employees in their main job and were:

- Single job holders who usually work 35 hours or more a week, or usually work fewer than 35 hours but worked 35 hours or more during the reference week; or
- Multiple job holders who usually work 35 hours or more in their main job and those who, although usually working fewer than 35 hours in their main job, worked 35 hours or more during the reference week.

Fully self-funded

Funded entirely from superannuation or any other income source, excluding any form of a government pension and/or allowance.

Future starters

People waiting to start, within four weeks of the end of the reference week, a new job that they have already obtained (and could have started in the reference week if the job had been available then). Under International Labour Organisation (ILO) guidelines, these persons do not have to be actively looking for work to be classified as unemployed.

G

Government pension/allowance

Income support payments from government to people under social security and related government programs. Included are pensions and allowances received by aged, disabled, unemployed and sick people, families and children, veterans and their survivors, and study allowances for students. Payments made by overseas governments as well as the Australian government are included.

Gross flows

The matching of respondents who report in consecutive months enables analysis of the transition of individuals between the different labour force status classifications, referred to as the matched sample. The transition counts between the different labour force status classifications from one point in time to the next are commonly referred to as gross flows.

The figures presented in gross flows are presented in original terms only and do not align with published labour force estimates. The gross flows figures are derived from the matched sample between consecutive months, which after taking account of the sample rotation and varying non-response in each month is approximately 80 percent of the sample.

Caution should be exercised when analysing these gross flows data due to:

- the figures presented sum to approximately 80 percent of the population values as the gross flows data are based on the matched sample only;
- there is no adjustment applied to account for changes due to seasonal patterns (referred to commonly as seasonal adjustment); and
- the estimates of relative sizes of each transition class are subject to bias due to the matched sample being a non-representative sample.

Gross wages and salaries

Payments to employees before tax and other items (such as employee contributions to superannuation) are deducted, and comprise:

- payments for time worked;
- payments for time not worked (such as annual, sick and other leave, and public holidays); and
- leave loading payments.

Included are amounts paid from interstate or overseas; ordinary time and overtime earnings; over award payments; penalty payments, shift and other remunerative allowances; retainers and commissions paid to employees who received a salary; bonuses and similar payments; payments under incentive, piecework or profit sharing schemes; advance and retrospective payments; and salaries and fees paid to company directors and members of boards who received a salary.

Excluded are reimbursements of expenses, e.g. travel, entertainment, meals etc. and drawings from profits by directors or office holders. Also excluded are salary sacrifice amounts, wages and salaries reimbursed under government employment programs, and workers' compensation payments paid through the payroll.

H

Had a job since arrival

Includes persons who currently have a job or who had a job at some time since their arrival.

Had a job to go to

People who were waiting to start a job, but would not be starting within four weeks. Also includes people who had a job but, up to the end of the reference week, had been away from work without pay for four weeks or longer and had not been actively looking for work.

Had ever worked for two weeks or more

People who are not in the labour force or are unemployed and have previously worked for two weeks or more.

Had previously worked

People who are not in the labour force or are unemployed, who have previously worked for two weeks or more, less than 20 years ago.

Had worked before

Refers to employees (excluding OMIEs) who had worked before and were either out of work or changed their employer before starting their current job.

Has never worked

Unemployed persons who have not worked in the last 2 years are categorised as those who have never worked before (looking for first job) or those who last worked 2 or more years ago (former worker).

Higher education institution or organisation

An Australian institution providing higher education courses, e.g. universities; colleges of advanced education; institutes of advanced education; institutes of higher education; institutes of tertiary education; agricultural colleges; and some institutes of technology, and the equivalent institutions overseas.

Holiday leave

The entitlement of an employee to paid holiday, paid vacation or paid recreation leave in their main job.

Hours paid for in main job

The number of hours for which employees and OMIEs were paid in their main job in their last pay, not necessarily the number of hours actually worked during the reference week (e.g. a person on paid leave for the week was asked to report the number of hours for which they were paid).

Hours paid for in main job in last pay

The number of hours for which employees were paid in their main job in their last pay, not necessarily the number of hours actually worked during the reference week (e.g. an employee on paid leave for the week was asked to report the number of hours for which they were paid).

Hours usually worked

The number of hours usually worked in a week.

Hours worked

The number of hours actually worked during the reference week.

Household

One or more persons usually resident in the same private dwelling.

Husband/ Partner

A person in a couple relationship with another person usually resident in the same household. The couple relationship may be in either a registered or de facto marriage and includes same-sex couples.

I**Incoming rotation group**

The LFS sample is made up of eight rotation groups of approximately equal size and characteristics. Each rotation group is in the survey for a period of eight months. Each month a new rotation group enters the sample to replace the rotation group that completed its eighth survey the month before. The new rotation group is called the incoming rotation group.

Incorporated enterprise

An enterprise which is registered as a separate legal entity to its members or owners (also known as a limited liability company).

Independent contractors

Independent contractors are persons who operate their own business and who are contracted to perform services for others without having the legal status of an employee, i.e. persons who are engaged by a client, rather than an employer to undertake the work. Independent contractors are engaged under a contract for services (a commercial contract), whereas employees are engaged under a contract of service (an employment contract).

Independent contractors' employment may take a variety of forms: for example, they may have a direct relationship with a client or work through an intermediary. Independent contractors may have employees, however they spend most of their time directly engaged with clients or on client tasks, rather than managing their staff.

Index number

Measures the ratio of the price of labour between the commencement of the index series and a later period.

Index reference period

The period for which an index series is given the value of 100.0.

Individual arrangement

An arrangement between an employer and an individual employee on the terms of employment (pay and/or conditions) for the employee. Common types of individual arrangements are individual contracts, letters of offer and common law contracts. Employees are classified to the Individual arrangement category if they have their pay set by an individual contract, individual agreement registered with a Federal or State industrial tribunal or authority (e.g. Australian Workplace Agreement), common law contract (including for award or agreement free employees), or if they receive over-award payments by individual agreement.

However, the Fair Work Act 2009 does not allow the making of new individual employee agreements. Collective enterprise agreements contain a provision which allows flexibility in the workplace to be achieved by agreement between an employer and individual employee. Agreements which existed under the Workplace Relations Act will continue in existence under the Fair Work Act 2009 as 'agreement-based transitional instruments'. These are defined by the Fair Work (Transitional and Consequential Amendments) Act 2009 (TA Act).

Industry

An industry is a group of businesses or organisations that undertake similar economic activities to produce goods and/or services.

Institutionalised persons

Residents of selected institutions or special dwellings excluding live-in staff who do not usually live in a private dwelling. Institutions include hospitals, homes and prisons.

Intends to retire from the labour force

Those people who indicated that they intend to give up all labour force activity: working or looking for work.

Intention to enter the labour force in the next 12 months

The intention of people to work or look for work in the 12 months following the interview.

Interstate

Refers to whether persons were prepared to move to another state or territory if offered a suitable job.

Intrastate

Refers to whether persons were prepared to move to another part of their state or territory if offered a suitable job.

J

Job

Any paid employment, full-time or part-time, lasting two weeks or more.

Jobless family

A jobless family is a family where no persons in the family aged 15 years or over are employed. This includes dependants.

In a jobless family, all of the family members are either unemployed and/or not in the labour force.

Families that have no employed members but do have members that are classified as undetermined in the scope of the labour force survey, such as members of the permanent Australian defence force, are not included in the number of jobless families.

Job starters

Employed persons who started their current job in the previous 12 months.

Job vacancy

A job vacancy is a job available for immediate filling on the survey reference date and for which recruitment action has been taken. Recruitment action includes efforts to fill vacancies by advertising, by on site or online notices, by notifying employment agencies or trade unions and by contacting, interviewing or selecting applicants already registered with the enterprise or organisation.

Estimates of job vacancies exclude:

- jobs not available for immediate filling on the survey reference date;
- jobs for which no recruitment action has been taken;
- jobs which became vacant on the survey date and were filled on the same day;

- jobs of less than one day's duration;
- jobs only available to be filled by internal applicants within an organisation;
- jobs to be filled by employees returning from paid or unpaid leave or after industrial disputes;
- vacancies for work to be carried out by contractors; and
- jobs for which a person has been appointed but has not yet commenced duty.

Junior rate

Payment at a proportion of the full adult rate stipulated in an award, agreement or the minimum wage order in the relevant jurisdiction, based on age.

L

Labour force

For any group, persons who were employed or unemployed, as defined.

Labour force participation rate

For any group, the labour force expressed as a percentage of all persons aged 15 years and over in the same group.

Labour force status

A classification of the civilian population aged 15 years and over into employed, unemployed or not in the labour force, as defined. The definitions conform closely to the international standard definitions adopted by the International Conferences of Labour Statisticians.

Labour force underutilisation rate

The sum of the number of unemployed persons and the number of underemployed workers expressed as a percentage of the labour force.

Labour hire firm

A labour hire firm is an organisation which is engaged in personnel search, or selection and placement of people for an employing organisation. The agency or firm may also be engaged in supply of their own employees to other employers, usually on a short-term basis. (See also employment agency).

Labour hire workers

Labour hire workers are persons who found their job through a labour hire firm/employment agency and are paid by the labour hire firm/employment agency.

Labour market region

Labour market regions reflect the labour markets within each state and territory. Labour market regions are equivalent to Statistical Areas Level 4 (SA4s) and are smallest geographical output of LFS data.

The Australian Statistical Geography Standard (ASGS) is used to classify geographical areas of Australia for statistical purposes. In the LFS, geographical areas relate to a person's usual residence, classified according to the ASGS.

Last 12 months

The 12 months up to and including the survey reference week.

Last job

Refers to last job less than 20 years ago.

Last worked two or more years ago

Unemployed persons who have not worked in the last 2 years are categorised as those who have never worked before (looking for first job) or those who last worked 2 or more years ago (former worker).

Left a job

Persons who are classified as involuntarily ceasing their last job.

Left last job

Unemployed persons who have worked in the last two years are classified by whether they left or lost their job.

Persons who provided one of the following reasons for ceasing their last job are categorised as leaving their last job:

- unsatisfactory work arrangements/pay/hours;

- to obtain a better job or conditions;
- the job was a holiday job;
- they left the job to return to studies;
- their last job was running their own business which closed down or was sold, for reasons other than financial difficulties;
- start own or new business;
- family reasons: get married, have children, holidays, caring, move house, spouse transferred; or
- retired.

Level not determined

Level not determined includes inadequately described responses or where no responses were given.

Level of highest educational attainment

Level of highest educational attainment identifies the highest achievement a person has attained in any area of study. It is not a measurement of the relative importance of different fields of study but a ranking of qualifications and other educational attainments regardless of the particular area of study or the type of institution in which the study was undertaken. For more information regarding how Level of highest educational attainment is derived see Decision Table: Level of highest educational attainment. It is categorised according to the Australian Standard Classification of Education, 2001 Level of education classification.

Level of highest educational attainment (non-school priority)

A person's level of highest educational attainment (non-school priority) is their highest non-school qualification where they have completed one. For persons who have not completed a non-school qualification, their level of highest educational attainment (non-school priority) is the highest year of school they have completed. It is categorised according to the Australian Standard Classification of Education, 2001 Level of education classification.

Level of highest non-school qualification

A person's level of highest non-school qualification is the highest qualification a person has attained in any area of formal study other than school study. It is categorised according to the Australian Standard Classification of Education, 2001 Level of education classification.

Local government

All public sector units controlled by a local government are classified to the Local Level of Government. Local government units are usually known as councils and are constituted through Local Government legislation. They are established to govern articulated regions within the state or territory known variously as districts, municipalities, shires, or areas. The power to create or vary these regions usually lies with the Governor General, State Governor or a Commonwealth Minister.

Lone parent family

See One parent family.

Long-term unemployed

Persons whose duration of current period of unemployment is 12 months or more.

Long-term unemployment ratio

The number of long-term unemployed persons, expressed as a percentage of the total unemployed population.

Looking for first job

Unemployed persons who have never worked before are categorised as those who have never worked before (looking for first job) or those who last worked 2 or more years ago (former worker).

Looking for work with more hours

Looked for work with more hours at some time during the four weeks up to the end of the reference week.

Lost a job

Persons who have worked for two weeks or more in the past two years and who left that job involuntarily.

Lost last job

Unemployed persons who have worked in the last two years are classified by whether they left or lost their job.

Persons who provide one of the following reasons for ceasing their last job are categorised as losing their last job:

- laid off or retrenched from that job;
- left that job because of their own ill-health or injury;
- job was seasonal or temporary;

- they were running their own business and the business closed down because of financial difficulties; or
- dismissed.

M

Main activity when not in the labour force

The main activity of people who are not in the labour force since they last worked or looked for work (or in the last 12 months if they haven't worked in the last year).

Main applicant

The 'main applicant' is generally the person whose skills or proposed activities in Australia are assessed by the Department of Immigration and Border Protection as part of their visa application. They will usually have been specifically identified on the application form as the 'main applicant'. The type of visa is granted to the main applicant, and the secondary applicants (i.e. spouse or dependents).

Main difficulty in finding work

The self-reported main difficulty in finding work experienced during the current period of unemployment.

Main English-speaking countries

The list of main English-speaking countries provided here is not an attempt to classify countries on the basis of whether or not English is the predominant or official language of each country. It is a list of the main countries from which Australia has historically received significant numbers of overseas settlers who are likely to speak English. These countries comprise the United Kingdom, the Republic of Ireland, New Zealand, Canada, South Africa and the United States of America.

Main field of education

The main subject matter of the study undertaken by a person in completing an educational activity. It is categorised according to the Australian Standard Classification of Education, 2001 Field of education classification.

Main field of non-school qualification

Main field of non-school qualification is defined as the subject matter of the qualification. It is categorised according to the Australian Standard Classification of Education (ASCED), 2001 Field of Education classification.

Main job

The job in which most hours are usually worked.

Main job during school holidays

The job in which the child worked the most hours during school holidays.

Main job during school terms

The job in which the child worked the most hours during school terms.

Managerial employees

Employees who have strategic responsibilities in the conduct or operations of the organisation and/or are in charge of a significant number of employees. These employees usually do not have an entitlement to paid overtime. Includes professionally qualified staff who primarily perform managerial tasks in conjunction with utilising their professional skills. Owner managers of incorporated enterprises are regarded as managerial employees.

Marginal attachment to the labour force

People who were not in the labour force in the reference week, wanted to work and:

- were actively looking for work but did not meet the availability criterion to be classified as unemployed; or
- were not actively looking for work but were available to start work within four weeks.

The criteria for determining those in the labour force are based on activity (i.e. working or looking for work) and availability to start work during the reference week. The criteria associated with marginal attachment to the labour force, in particular the concepts of wanting to work and reasons for not actively looking for work, are more subjective. Hence, the measurement against these criteria is affected by the respondent's own interpretation of the concepts used. An individual respondent's interpretation may be affected by their work aspirations, as well as family, economic and other commitments.

Market sector

The market sector is an industry grouping comprising the following industries: Agriculture, forestry and fishing; Mining; Manufacturing; Electricity, gas, water and waste services; Construction; Wholesale trade; Retail trade; Accommodation and food services; Transport, postal

and warehousing; Information media and telecommunications; Finance and insurance services; Rental, hiring and real estate services; Professional, scientific and technical services; Administrative and support services; Arts and recreation services; and Other services. Refer to Australian National Accounts: Concepts, Sources and Methods.

Matched common sample

Respondents who report in consecutive months make up the matched common sample from which gross flow figures are derived.

After taking account of the sample rotation and varying non-response in each month, the matched common sample is approximately 80 percent of the original dataset for any month. The figures presented in gross flows do not align with published labour force estimates. The unmatched sample identifies those respondents who do not have a labour force status for the previous month, or those who do not have a labour force status for the current month.

Maternity/paternity leave

The provision by an employer of paid maternity/paternity leave.

Mean weekly earnings

The amount obtained by dividing the total earnings of a group by the number of employees and OMIEs in that group.

Median earnings

The amount of earnings which divides employees into two groups containing equal numbers of employees, one half with earnings below the median and the other half with earnings above the median. The median is less affected by outliers and skewed data than the mean, and is usually the preferred measure of central tendency when the distribution is not symmetrical.

Median weekly earnings

The amount which divides the distribution of employees and OMIEs into two groups of equal size, one having earnings above and the other below that amount.

Method of setting pay

How an employee's pay is set. Methods are classified to one of the following categories: Award only; Collective agreement; Individual arrangement; or Owner manager of incorporated enterprise.

Mode of travel to and from work

Refers to the mode(s) of transport usually used to get to and from the place(s) of work. It excludes travel undertaken during the course of work.

Monthly hours worked in all jobs

Monthly hours worked in all jobs measures the total number of actual hours worked by employed persons in a calendar month. It differs from the actual hours worked estimates (and the usual hours worked estimates) since these refer only to the hours worked in the reference week.

The methodology used to produce monthly hours worked in all jobs means that these are synthetic estimates. Seasonally adjusted and trend estimates of monthly hours worked in all jobs are available for the period July 1978 onwards.

Further information on the methodology used to produce the monthly hours worked in all jobs estimates is available on the ABS website in Information Paper: Expansion of Hours Worked Estimates from the Labour Force Survey.

Actual and usual hours worked cannot be aggregated across time to produce either quarterly or annual estimates as they relate to only a single week in the month. In contrast, monthly hours worked in all jobs estimates are a true monthly measure, and may be aggregated across time to produce both quarterly and annual estimates.

Mother

A female parent with dependants and/or children, or non-dependent children. The relationship between a mother and a child/dependant can be formed via a natural, adoptive, step, foster or child dependency relationship.

Multiple jobholder

Employed persons who, during the reference week, worked in more than one job. Multiple jobholders exclude those who changed employer during the reference week. People who were unpaid voluntary workers or on unpaid trainee/work placement in their second job were excluded from the Multiple jobholder population. Information on earnings in main job is collected from all multiple jobholders. Information on earnings in second job is only collected from multiple jobholders who were employees or OMIEs in their second job and were an employee or OMIEs in their main job.

N

Non-dependent child

Non-dependent children are defined as children over the age of 15 years who are not studying full-time.

In order to be classified as a child, the person must have no partner or child of his/her own usually resident in the household. A separate family in the household is formed in this instance.

The types of parent-child relationships which can be formed are via a natural, adoptive, step, or foster relationship.

Dependency, as used in these classifications, refers to economic dependency and is only applied to the part of the population that can be described as 'children'.

The dependency criterion is based on the barriers to full-time employment: age and student status. Essentially, once a child turns 15 years and becomes eligible to be included in the labour force, they lose their dependency status unless they are attending school or a tertiary educational institution full-time, are aged 15 to 24 years old and live in the same household as their parents/ guardian.

Non-economic reasons

Non-economic reasons for full-time workers having worked fewer than 35 hours in the reference week include:

- holiday, flextime or study leave;
- own illness or injury or sick leave;
- standard work arrangements, shift work or rostered day(s) off;
- on strike, locked out or took part in an industrial dispute;
- bad weather or plant breakdown;
- began, left or lost job during the reference week; and
- personal reasons.

Non-managerial employees

Employees who are not managerial employees (as defined above), including non-managerial professionals and some employees with supervisory responsibilities.

Non-market sector

The non-market sector is an industry grouping comprising the following industries: Education and training; Public administration & safety; and Health care and social assistance. Refer to Australian National Accounts: Concepts, Sources and Methods.

Non-private dwelling

An establishment which provides a communal type of accommodation, such as a hotel, motel, hospital or other institution.

Non-school qualification

Non-school qualifications are awarded for educational attainments other than those of pre-primary, primary or secondary education. They include qualifications at the Postgraduate Degree level, Master Degree level, Graduate Diploma and Graduate Certificate level, Bachelor Degree level, Advanced Diploma and Diploma level, and Certificates I, II, III and IV levels. Non-school qualifications may be attained concurrently with school qualifications.

Not available to start work

Refers to people who were not available to start work with more hours either in the reference week, or in the four weeks following the interview.

Not employed

People who are either unemployed or not in the labour force.

Not fully employed

People who are not fully employed comprise part-time workers who would prefer to work more hours, and full-time workers who worked part-time hours in the reference week for economic reasons.

Not in labour force

Persons who were not in the categories employed or unemployed, as defined. They include people who undertook unpaid household duties or other voluntary work only, were retired, voluntarily inactive and those permanently unable to work.

Not retired from the labour force

People aged 45 years and over who have, at some time, worked for two weeks or more and were not retired from the labour force. That is,

either employed, unemployed or not in the labour force and intend to look for, or take up, work in the future.

Number of offers of employment

The number of separate offers of employment received during the current period of unemployment.

Number of months with current employer or business

The elapsed period to the end of the reference week that an employed person has held their main job, that is the job in which a person works the most hours.

Number of weeks worked

The number of weeks within the reference period where the child did any work. For example, if a child worked one hour a week for five weeks, this would constitute five weeks worked. If a child worked 20 hours a week for five weeks, this would also constitute five weeks worked.

O

Occupation

An occupation is a collection of jobs that are sufficiently similar in their title and tasks, skill level and skill specialisation which are grouped together for the purposes of classification.

On call

A shift arrangement, for being available, when not at work, to be contacted to resume work. An allowance may be paid to the employee for being on call.

One parent family

A family consisting of a lone parent with at least one dependent or non-dependent child (regardless of age) who is also usually resident in the family. This family type may or may not include other related individuals.

Opposite-sex couple

Two persons of the opposite sex who are in a couple relationship and are usually resident in the same household.

Ordinary time cash earnings

Payment for award, standard or agreed hours of work, including allowances, penalty payments, payments by measured result and regular bonuses and commissions. Ordinary time cash earnings are inclusive of amounts salary sacrificed. Excluded are non-cash components of salary packages, overtime payments, retrospective pay, pay in advance, leave loadings, severance pay, and termination and redundancy payments.

Ordinary time hourly rates of pay index

Measures quarterly change in ordinary time hourly rates of pay.

Ordinary time hours

Award, standard or agreed hours of work paid for at the ordinary rate.

Ordinary time hours paid for

Award, standard or agreed hours of work, paid for at the ordinary time rate. Included is stand-by or reporting time which is part of standard hours of work, and that part of annual leave, paid sick leave and long service leave taken during the reference period.

Other families

A family of related individuals residing in the same household. These individuals do not form a couple or parent-child relationship with any other person in the household and are not related to a couple or one parent family in the household.

If two brothers, for example, are living together and neither is a partner, a lone parent or a child to someone else in the household, and neither is related to any person in the household who is in a couple or one-parent family, then they are classified as an 'other family'. However, if the two brothers share the household with the daughter of one of the brothers and her husband, then both brothers are attached to the couple family and classified as other related individuals.

Outgoing rotation group

The LFS sample is made up of eight rotation groups of approximately equal size and characteristics. Each rotation group is in the survey for a period of eight months. Each month a new rotation group enters the sample to replace the rotation group that completed its eighth survey the month before. During its eighth and last month in the survey, a rotation group is called the outgoing rotation group.

Overtime

Work undertaken which is outside, or in addition to, ordinary working hours in main job, whether paid or unpaid.

Overtime earnings

Payment for hours worked in excess of award, standard or agreed hours of work.

Overtime hours

The number of hours paid for in excess of ordinary time hours.

Overtime hours paid for

Hours paid for in excess of award, standard or agreed hours of work.

Owner managers of incorporated enterprises (OMIEs)

People who work in their own incorporated enterprise, that is, a business entity which is registered as a separate legal entity to its members or owners (may also be known as a limited liability company). An owner manager of an incorporated enterprise may or may not hire one or more employees in addition to themselves and/or other owners of that business.

Owner managers of unincorporated enterprises (OMUEs)

A person who operates his or her own unincorporated enterprise or engages independently in a profession or trade.

An owner manager of an unincorporated enterprise may or may not hire one or more employees in addition to themselves and/or other owners of that business.

P

Paid leave entitlements

The entitlement of employees to either paid holiday leave, paid sick leave in their main job.

Parent or guardian

A parent is a natural, step, adoptive or foster mother or father of a child and resident in the same household as the child. A guardian is a person aged 15 years and over who is reported as being the guardian or main carer of a child, regardless of the existence of any legal arrangement, and resident in the same household as the child. The term 'parent' also refers to guardians.

Partially self-funded

Funded by government pension and/or allowance and at least one other income source.

Participation rate

For any group, the labour force expressed as a percentage of the civilian population aged 15 years and over in the same group.

Part-time employees

Employees who normally work less than the agreed or award hours for a full-time employee in their occupation. If agreed or award hours do not apply, employees are regarded as part-time if they ordinarily work less than 35 hours per week.

Part-time preference

People who preferred to work one to 34 hours a week. Part-time preference is derived by applying data collected on respondents' preferred number of hours to those who intended to or might enter the labour force in the next 12 months.

Part-time workers

Employed persons who usually worked fewer than 35 hours a week (in all jobs) and who either did so during the reference week, or were not at work in the reference week.

Part-time workers (usual)

Employed people who usually work less than 35 hours a week (in all jobs).

Part-time workers in main job

People who were employees in their main job and were:

- Single job holders who usually work fewer than 35 hours a week, and did so in the reference week; or
- Multiple job holders who actually worked fewer than 35 hours in their main job in the reference week, or were away from their main job but usually work fewer than 35 hours a week in their main job.

Payroll tax

Employers whose wage and salary payments reach a specified level, as defined in each state or territory's payroll tax legislation, are liable to pay this tax. Employers may claim exemptions for some categories of employees. In addition, certain types of organisations are exempt from payroll tax. The types of organisations that may be exempt, depending on the state of operation, include religious, not-for-profit, health care, educational and state and local government organisations.

Percentile

Any of a hundred divisions of an earnings or hours distribution. For example:

- 25% of employees earn less than or equal to the 25th percentile
- 75% of employees earn less than or equal to the 75th percentile.

Permanent or fixed term employees

Permanent employees are usually employed on an ongoing basis and are entitled to paid annual and sick leave. Fixed term employees are employed for a specified period of employment, and may be entitled to paid leave.

Permanent visa

The permission or authority granted by Australia for foreign nationals to live in Australia permanently.

Personal reasons for not actively looking for work

Includes 'own short-term illness or injury' or 'long-term health condition or disability', 'pregnancy', 'attending an educational institution', 'had no need to work', 'welfare payments or pension may be affected', and 'moved house or on holidays'.

Persons in the labour force

Persons who were classified as being in the labour force, that is, either employed or unemployed.

Persons not in the labour force

Persons who were not classified as employed or unemployed. Persons not in the labour force can be divided into those who are marginally attached to the labour force, and those who are not. Persons who are marginally attached to the labour force satisfy some, but not all, of the criteria required to be classified as unemployed.

Persons not in the labour force are considered to be marginally attached to the labour force if they:

- wanted to work and were actively looking for work (but, unlike unemployed persons, were not available to start work in the reference week); or
- wanted to work and were not actively looking for work but were available to start work within four weeks.

Persons not in the labour force are not marginally attached to the labour force if they:

- did not want to work; or
- wanted to work but were not actively looking for work and were not available to start work within four weeks.

Preferred number of extra hours

The number of extra hours a week an underemployed worker would have preferred to work.

Preferred number of hours

The number of hours unemployed persons would like to work each week.

Preferred to work more hours

Employed persons who usually work 0–34 hours each week and would prefer to work more hours than they usually work.

Preferred total number of hours

The total number of hours per week an underemployed worker would prefer to work.

Previous job

The last job in which employment ceased during the last 12 months.

Private dwelling

A residential structure which is self-contained, owned or rented by the occupants, and intended solely for residential use. A private dwelling may be a flat, part of a house, or even a room, but can also be a house attached to, or rooms above shops or offices.

Private health insurance

Includes hospital and/or extras cover only. People who reported ambulance cover only, or other health arrangements (e.g. DVA), are not considered to have private health insurance.

Q

Qualification

Formal certification, issued by a relevant approved body, in recognition that a person has achieved an appropriate level of learning outcomes or competencies relevant to identified individual, professional, industry or community needs. Statements of attainment awarded for partial completion of a course of study at a particular level are excluded.

Quarterly hours worked in all jobs

Quarterly hours worked in all jobs is a three month aggregate of monthly hours worked in all jobs. It shows the total number of actual hours worked by all employed persons in a period of three calendar months.

R

Reason left or lost last job

Unemployed persons who have worked in the last two years are classified by whether they left or lost their job.

Persons who provided one of the following reasons for ceasing their last job are categorised as leaving their last job

- unsatisfactory work arrangements/pay/hours;
- to obtain a better job or conditions;
- the job was a holiday job;
- they left the job to return to studies;
- their last job was running their own business which closed down or was sold, for reasons other than financial difficulties;
- start own or new business;
- family reasons: get married, have children, holidays, caring, move house, spouse transferred; or
- retired.

Persons who provide one of the following reasons for ceasing their last job are categorised as losing their last job:

- laid off or retrenched from that job;
- left that job because of their own ill-health or injury;
- job was seasonal or temporary;
- they were running their own business and the business closed down because of financial difficulties; or
- dismissed.

Reason not in the labour force

A person's reason for not participating in the labour force.

Reason work resumed

Reason work resumed statistics relate to the reason for ending the stoppage of work as reported and not necessarily to the reason(s) for settling all matters in dispute. Therefore, they do not reflect the relative importance of the work of various industrial tribunals operating under state and federal legislation. The classification of Reason work resumed is as follows:

- Negotiation without intervention of a third party: Negotiation between the parties involved, or their representatives, without the intervention or assistance of authorities constituted under state or federal industrial legislation, and without mediation.
- State legislation: Intervention or assistance of an industrial authority or authorities created by, or constituted under, state industrial/workplace relations legislation. Disputes that are referred to a mediator by a state industrial tribunal, either on a voluntary or compulsory basis, are included under 'Mediation' (except in instances where mediation is directed and a return to work ordered).
- Federal legislation: Intervention or assistance of the Fair Work Commission (FWC). Disputes that are referred to a mediator by FWC, either on a voluntary or compulsory basis, are included under 'Mediation' (except in instances where mediation is directed and a return to work ordered).
- Pre-determined return to work: Disputes for which a return to work is determined prior to the industrial action, e.g. when employees decide to go out on strike for a pre-determined period of 24 hours.
- Resumption without negotiation: Disputes in which employees decide to return to work without the dispute being resolved, and without any negotiations having taken place to prompt the return, e.g. stop-work meetings, and disputes where employees decide to return to work to avoid further loss of earnings or for other reasons. This category may include some disputes which are settled subject to subsequent negotiation, such as industrial court hearings.
- Mediation: Disputes that are settled through the assistance of a mediator, either voluntarily or as directed by a state or federal industrial tribunal, e.g. FWC.
- Other reasons: Disputes whose settlement cannot be ascribed to any other category, e.g. replacing employees on strike or locked out, permanent closure of business, and dismissal or resignation of employees.

Reasons for turning down job offers

Classifies reasons for turning down job offers in current period of unemployment according to the following categories:

- Unsuitable Job Conditions
- Unsatisfactory pay/conditions
- Not in locality or line of work
- Hours unsuitable
- Unwilling to move state/city
- Too far to travel
- Personal Reasons
- Own short-term illness or injury
- Own long-term health condition or disability
- Pregnancy
- Affect welfare payments/pension may be affected
- Returned to study
- Family Reasons
- Childcare
- Ill health of other than self
- Other
- Waiting to start another job/starting new business
- Other reasons
- Did not know

Recent migrant

A person who was born overseas, who arrived in Australia after 2003, was aged 15 years or over on arrival, was not an Australian citizen or New Zealand citizen on arrival, does not currently hold New Zealand citizenship, and has permanent Australian resident status.

Reference week (LFS)

The week preceding the week in which the Labour Force Survey interview was conducted.

Relationship in household

The relationship of each person to the family reference person, or where the person is not part of a family that person's relationship to the household reference person.

Remoteness

The Australian Statistical Geography Standard (ASGS) is used to define remoteness. The Remoteness Structure is described in detail in the publication Australian Statistical Geography Standard (ASGS): Volume 5 - Remoteness Structure, July 2011.

Response rate

The number of fully responding dwellings expressed as a percentage of the total number of dwellings excluding sample loss. Examples of sample loss include: dwellings where all persons are out of scope and/or coverage; vacant dwellings; dwellings under construction; dwellings converted to non-dwellings; derelict dwellings; and demolished dwellings.

Retired from the labour force

People who had previously worked and had retired from work or looking for work, and did not intend to look for, or take up, work in the future.

Retrenchment

Includes retrenchment occurring in any job held in the three months prior to the survey reference week, not just the last job, and irrespective of a person's current labour force status. This item is measured by the total number of persons who ceased a job during the last three months because they were either:

- Retrenched, made redundant, employer went out of business, no work was available; or
- Self-employed persons whose business closed down for economic reasons, including went broke, liquidated, no work, no supply or demand.

S

Salary sacrifice

Salary sacrifice is defined as an arrangement where an employee agrees to forgo part of their pre-tax salary in return for benefits. Common types of salary sacrifice arrangements include pre-tax contributions to superannuation funds and novated leases for motor vehicles.

Same-sex couple

Two persons of the same sex who are in a couple relationship and are usually resident in the same household.

School holidays

The periods of time between school terms. It includes all school holidays in the reference period. It excludes holidays taken during school terms, public holidays that fall during school terms and pupil free days. Note that school holidays differ between states and territories. All work undertaken by home-schooled children has been included under school holidays.

School-based apprenticeship or traineeship

School-based apprenticeships or traineeships are undertaken part-time while at school and combine paid employment as an apprentice or trainee, vocational training and senior secondary school studies.

School study

School study is participation in primary or secondary level education, regardless of the institution or location where the study is or was undertaken. It therefore includes such study undertaken in a Technical and Further Education (TAFE) or other institution.

School terms

The official periods of time during which school was attended in the reference period. It includes weekends that fall between two weeks of school, pupil free days and public holidays that would otherwise constitute a school day. Note that school terms differ between states and territories.

Seasonal adjustment

Process of removing systematic calendar related effects from the original series.

Second job

A job, other than the main job

Secondary applicant

A person whose visa was granted on the basis of being the family member (e.g. spouse, dependent child) of a person who qualified for a visa. They will have been identified on the visa application as a secondary or an 'other' applicant with the person who met the visa criteria being specifically identified on the visa application as the 'main applicant'. The type of visa is granted to the main applicant, and the secondary applicants (i.e. spouse or dependents).

Sector

Public sector comprises local government authorities and all government departments and agencies created by, or reporting to the Commonwealth or State/Territory Parliaments. The private sector comprises all organisations not classified as public sector.

Sector of main job

Sector of main job is used to classify a respondent's employer as a public or private enterprise. The public sector includes all government units, such as government departments, non-market non-profit institutions that are controlled and mainly financed by government, and corporations and quasi-corporations that are controlled by government.

Severance, termination and redundancy payments

Costs incurred by employers on resignation, retirement, retrenchment or disablement of an employee.

Shift arrangements

A system of working whereby the daily hours of operation at the place of employment are split into at least two set work periods (shifts), for different groups of workers.

Shift work

A system of working whereby the daily hours of operation at the place of employment are split into at least two set work periods (shifts) for different groups of workers. Types of shifts include:

- Irregular shifts - Describes shifts that do not follow a set pattern.
- Regular shifts - Shifts worked to a set pattern of times. Regular shift times are presented as follows:
 - morning shifts - between 6.00am and 12.00pm;
 - afternoon shifts - between 12.00pm and 5.00pm; and
 - evening, night or graveyard shift - between 5.00pm and 6.00am
- Rotating shift - A shift arrangement, in which the shift worked changes periodically from one time period to another, for example from mornings or afternoons to evenings or nights.
- Split shift - Occurs when the worked period is broken by an extended unpaid 'free' period, thereby constituting an extended working

day consisting of two (or more) shifts.

Sick leave

The entitlement of an employee to paid sick leave in their main job.

Social marital status

Social marital status is the relationship status of an individual with reference to another person who is usually resident in the household. A marriage exists when two people live together as husband and wife, or partners, regardless of whether the marriage is formalised through registration. Individuals are, therefore, regarded as married if they are in a de facto marriage, or if they are living with the person to whom they are registered as married.

Socio-Economic Status (SEIFA-IRSD)

This is one of four Socio-economic Indexes for Areas (SEIFAs) compiled by the ABS following each Census of Population and Housing, from various characteristics of persons resident in particular areas. The Index of Disadvantage summarises attributes such as income, educational attainment, unemployment and occupation skill levels. The index refers to the area (the Statistical Area Level 1) in which a person lives, not to the socio-economic situation of the particular individual. The index ranks areas on a continuum from most disadvantaged to least disadvantaged. A low score on the index (i.e. lowest quintile or decile) indicates a high proportion of relatively disadvantaged people in an area. Such areas include many households with low income, people with no qualifications and many people in low skill occupations. It should be noted that it cannot be concluded that an area with a very high score has a large proportion of relatively advantaged ('well off') people, as there are no variables in the index to indicate this. It can only be concluded that such an area has a relatively low incidence of disadvantage. For further information about the indexes, see Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), 2011.

Standby

People who are usually waiting to restart work or people who have had to restart work after being recalled, without additional pay and allowances.

State government

All public sector units controlled by state/territory governments are classified to the State Level of Government. This includes government units controlled by a state/territory government, public financial corporations controlled by a state/territory government and public non-financial corporations controlled by a state/territory.

Status in employment

Status in employment is determined by an employed person's position in relation to their job, and is usually in respect of a person's main job if they hold more than one job. Employed persons are classified according to the reported relationship between the person and the enterprise for which they work, together with the legal status of the enterprise where this can be established. The groups include

- Employees with paid leave entitlements;
- Employees without paid leave entitlements;
- Owner manager of incorporated enterprise (OMIEs) with employees;
- Owner manager of incorporated enterprise (OMIEs) without employees;
- Owner manager of unincorporated enterprise (OMUEs) with employees;
- Owner manager of unincorporated enterprise (OMUEs) without employees; and
- Contributing family workers.

Stock estimates

Stock estimates are a measure of certain attributes at a point in time and can be thought of as stocktakes. For example, the total number of employed persons is an account of the number of people who were considered employed in the Labour Force Survey reference week.

Stood down

Persons who are in a situation where an employer is unable to provide useful work for its employees, for a particular period of time, for circumstances beyond its control.

Suitable job

A suitable job is:

- any job for which the person is qualified (if applicable), is capable of performing and which provides adequate job conditions (including pay, hours, travel to work, etc.); and
- it is a job that would be accepted by the person irrespective of whether a move was required.

Superannuation

Employer contributions to superannuation funds on behalf of employees. Contributions by employees, or employer contributions under salary sacrifice arrangements, are excluded.

Superannuation scheme

Any fund, association or organisation set up for the purpose of providing financial cover for members when they retire from work. Contributions could either have been made by the respondent, the respondent's partner or the respondent's employer.

T

TAFE

A Technical and Further Education institution. In Victoria this may also be interpreted as Training and Further Education.

Temporary resident

A temporary resident is a person who:

- was born overseas;
- who first arrived to live in Australia (for one year or more) after 2006;
- was aged 15 years or over on arrival;
- was not an Australian citizen or New Zealand citizen on arrival;
- does not currently hold New Zealand citizenship; and
- has a temporary visa.

Temporary visa

The permission or authority granted by Australia for a foreign national to travel to Australia and stay up to a specified period of time.

Temporary entrants include:

- tourists;
- students;
- business people;
- people with specialist skills, such as managers, academics and medical practitioners;
- people who make a social or cultural contribution to the community, such as entertainers, media and film staff, sports people, religious workers, visiting academics and public lecturers; and
- people who contribute to the development of international relations, such as participants in exchange programs and working holiday makers.

Time since last job

The elapsed time since ceasing the last job.

Time(s) of the day worked

Refers to the time(s) of the day usually worked that is the most common pattern of work undertaken. Time used for preparation is included. Children were counted in each of the time period categories they worked in, even if they did not work for the whole of that period. Children may appear in more than one category as they may have worked across more than one of the time periods presented.

Total hourly rates of pay index

Measures quarterly change in combined ordinary time and overtime hourly rates of pay.

Total hours paid for

The sum of ordinary time hours paid for plus overtime hours paid for.

Trade union

An organisation consisting predominantly of employees, the principal activities of which include the negotiation of rates of pay and conditions of employment for its members.

Trade union member

Employed persons who are a member of a trade union, not necessarily in connection with their main job.

Trade union member in main job

Employed persons with membership in a trade union in connection with their main job.

Trainee

A trainee is a person who has entered into a legal contract (called a training agreement or contract of training) with an employer, to serve a period of training in a vocational area (e.g. office administration, information technology, hospitality). Apprentices and trainees are

identified by their answer to a question specifically pertaining to the Australian Apprenticeship Scheme. Note that School-based Apprenticeships/Traineeships are excluded.

Trend series

A smoothed seasonally adjusted series of estimates.

Type of visa as at time of interview (current visa)

The visa the respondent held at the time of interview that allowed them to stay in Australia. Categories for type of visa are:

- Australian citizen - Persons who arrived to live in Australia on a permanent or temporary visa and have since obtained Australian citizenship;
- Permanent Skilled - Skilled migrants are selected on the basis of their age, skills and their ability to quickly make a contribution to the Australian economy. Includes Independent, Family or government sponsored, and Employer sponsored visas;
- Permanent Family - Includes Partner, Child and Parent visas;
- Permanent Humanitarian - Includes Special Humanitarian Program and Refugee visas;
- Permanent Other/n.f.d. - Includes all other permanent visa categories or where the type of permanent visa could not be determined;
- Temporary Student - Temporary student visas are granted to people studying or seeking study, training or skills development in Australia, and are planning to stay in Australia for 12 months or more; and
- Temporary Other/n.f.d. - Includes tourists, working holiday makers and visitors planning to stay in Australia for 12 months or more, or where the type of temporary visa could not be determined.

A respondent's visa type as at the time of interview may be different from the type of visa held on arrival to live in Australia. This may be the result of a respondent obtaining Australian citizenship, or the respondent's successful onshore application to another visa type after arrival.

Type of visa on arrival to live in Australia (initial visa)

The visa the respondent held when they first arrived in Australia to live that allowed them to come to Australia. Categories for type of visa on arrival to live in Australia are as for 'Type of visa as at time of interview.

A respondent's type of visa on arrival to live in Australia may differ from the type of visa held as at time of interview. This may be the result of a respondent obtaining Australian citizenship, or the respondent's successful onshore application to another visa type after arrival.

U

Underemployed workers

Employed persons aged 15 years and over who want, and are available for, more hours of work than they currently have. They comprise:

- persons employed part-time who want to work more hours and are available to start work with more hours, either in the reference week or in the four weeks subsequent to the survey; or
- persons employed full-time who worked part-time hours in the reference week for economic reasons (such as being stood down or insufficient work being available). It is assumed that these people wanted to work full-time in the reference week and would have been available to do so.

Underemployment rate (proportion of labour force)

The number of underemployed workers, expressed as a percentage of the labour force.

Underemployment ratio (proportion of employed)

The number of underemployed workers, expressed as a percentage of total employed persons

Underutilisation rate

The sum of the number of persons unemployed and the number of persons in underemployment, expressed as a proportion of the labour force.

Unemployed

Persons aged 15 years and over who were not employed during the reference week, and:

- had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week and were available for work in the reference week; or
- were waiting to start a new job within four weeks from the end of the reference week and could have started in the reference week if the job had been available then.

Unemployed looked for full-time work

Unemployed persons who:

- actively looked for full-time work; or

- were waiting to start a new full-time job.

Unemployed looked for only part-time work

Unemployed persons who:

- actively looked for part-time work only; or
- were waiting to start a new part-time job.

Unemployment rate

For any group, the number of unemployed persons expressed as a percentage of the labour force in the same group.

Unincorporated enterprise

A business entity in which the owner and the business are legally inseparable, so that the owner is liable for any business debts that are incurred.

Unmatched common sample

The unmatched common sample consists of respondents from households who were part of the seven common rotation groups for the current and previous month (i.e. not part of the incoming group), but for whom a response was obtained in the current but not the previous month, or vice versa. This may be due to, for example, new or different persons residing in the same household, or the same respondent from a household being unable to be contacted in the current or previous month.

Unmatched sample

The unmatched sample for a particular month identifies those respondents who do not have a labour force status for the previous month, or those who do not have a labour force status for the current month.

The total unmatched sample consists of distinct two groups:

- the incoming rotation group, and
- the unmatched common sample.

Unpaid activities

Includes caring for own children or other people's children including grandchildren. Also includes caring for elderly or someone with long-term illness or disability or undertaking unpaid voluntary work.

Usual hours of work

Usual hours of work refer to a typical period rather than the hours worked in a specified reference period. The concept of usual hours applies both to persons at work and to persons temporarily absent from work, and is defined as the hours worked during a typical week or day. Actual hours worked (for a specific reference period) may differ from usual hours worked due to illness, vacation, strike, overtime work, a change of job, or similar reasons.

Usual number of hours

The number of hours usually worked in a week.

Usual resident

A person who usually lives in that particular dwelling and regards it as their own or main home.

V

Vocational Education and Training (VET)

VET relates to education and training that aims to equip people with knowledge, skills and/or competences required in particular occupations or, more broadly, on the labour market. VET is a component of apprenticeships or traineeships, including those that are school-based. However, VET can be undertaken without also undertaking an apprenticeship or traineeship.

Volume measures of underutilisation

Volume measures relate to the unused potential hours of labour in comparison to the hours usually worked by employed persons. They are relevant for analysing the spare capacity of the labour force, as they take into account the number of hours sought and additional hours preferred by individuals whose labour is not fully utilised.

Underutilised hours of labour are comprised of:

- for unemployed persons: the number of hours of work sought;
- for part-time underemployed persons: the number of additional hours preferred; and

- for full-time underemployed persons (i.e. full-time employed persons who worked less than 35 hours in the reference week for economic reasons): the difference between the number of hours usually worked and actually worked in the reference week.

The total potential hours in the labour force is the sum of the hours usually worked by all employed persons, plus the number of hours of underutilised labour as described above.

W

Wage price index

Measures changes in the price of wages.

Wanted a paid job

People who are not in the labour force and would like a paid job of any kind. Includes people who said 'depends'.

Wanted more hours

See 'Preferred to work more hours'.

Wanted to work

People not in the labour force who were not actively looking for work who answered 'yes' or 'maybe' when asked if they would like a job, as well as those people not in the labour force who were actively looking. It is assumed those people actively looking want a job.

Weekly earnings

Amount of 'last total pay' (i.e. before taxation, salary sacrifice and other deductions had been made) from wage and salary jobs prior to the interview. For persons paid other than weekly, earnings were converted to a weekly equivalent. No adjustment was made for any back payment of wage increases, prepayment of leave or bonuses, etc.

Weekly ordinary time earnings

Weekly ordinary time earnings refers to one week's earnings of employees for the reference period, attributable to award, standard or agreed hours of work. It is calculated before taxation and any other deductions (e.g. superannuation, board and lodging) have been made.

Included in ordinary time earnings are award, workplace and enterprise bargaining payments, and other agreed base rates of pay, over-award and over-agreed payments, penalty payments, shift and other allowances, commissions and retainers, bonuses and similar payments related to the reference period, payments under incentive or piecework, payments under profit sharing schemes normally paid each pay period, payment for leave taken during the reference period, all workers' compensation payments made through the payroll, and salary payments made to directors.

Excluded are amounts salary sacrificed, non-cash components of salary packages, overtime payments, reimbursements to employees for travel, entertainment, meals and other expenditure incurred in conducting the business of their employer, and other payments not related to the reference period.

Weekly total cash earnings

The sum of weekly ordinary time cash earnings plus weekly overtime earnings.

Weekly total earnings

Weekly total earnings of employees is equal to weekly ordinary time earnings plus weekly overtime earnings.

Weight reference period

The period to which the expenditure weights relate.

Wife/partner

A person in a couple relationship with another person usually resident in the same household. The couple relationship may be in either a registered or de facto marriage and includes same-sex couples.

With paid leave entitlements

Employees who were entitled to either paid holiday leave or paid sick leave (or both) in their main job.

Without paid leave entitlements

Employees who were not entitled to paid holiday leave and paid sick leave, or did not know whether they were entitled to paid holiday leave or paid sick leave in their main job.

Worked at some time in the last 12 months

People who worked in a job which lasted for two weeks or more, in the last 12 months, regardless of whether they worked full-time or part-time.

Worked full-time

People who usually worked 35 hours or more per week in the job in which the work-related injury or illness occurred.

Worked in the last 12 months

Work occurred during the 12 month reference period if the child undertook activities for pay, profit, commission or payment in kind in a job, business or on a farm, or worked without pay in a family business or farm. Some examples of children's work include carrying out work for non-household members for payment, busking or delivering leaflets. Note that chores undertaken for the child's household are excluded.

Worked on a fixed-term contract

Employees with a contract of employment which specifies that the employment will be terminated on a particular date/event. Note, in some instances employees excludes owner managers of incorporated enterprises.

Worked part-time

People who usually worked less than 35 hours or more per week in the job in which the work-related injury or illness occurred.

Workers' compensation

Workers' compensation includes:

- payments by an insurer or other liable party for costs related to a work-related injury or illness;
- medical payments, incapacity payments (income maintenance and salary top-up), rehabilitation payments, travel payments and legal payments; and
- any 'settlement' or 'judgement of claim'.

Workers' compensation costs

Workers' compensation costs comprise, in general, the costs of insurance premiums paid plus any other costs not reimbursed by insurers. Premium rates are usually determined by considering the industry of the employer and the employer's previous claims history. Non-reimbursed costs may vary depending on the legislation which applies in each state, but can include wages and salaries, other costs such as medical and legal costs, and lump sum settlement payments. In addition, most states and territories allow very large employers to self-insure, where, except in extreme circumstances, workers' compensation costs are borne by the employers.

Working days lost

Working days lost refers to working days lost by employees directly and indirectly involved in the dispute.

Working days lost per employee involved

The average number of working days lost per employee involved in the dispute, calculated by dividing the number of working days lost in the dispute by the number of employees involved (both directly and indirectly).

Working days lost per thousand employees

Working days lost per thousand employees are calculated for a quarterly period by dividing the total number of working days lost in the period by the total number of employees in the Australian labour force in the period (obtained from the ABS Labour Force Survey (LFS)) and multiplying by 1,000. LFS employee estimates are revised periodically. As a result, estimates of working days lost per thousand employees are also subject to revision.

Work-related injury or illness

Any injury or illness or disease which first occurred in the last 12 months, where a person suffers either physically or mentally from a condition that has arisen out of, or in the course of, employment.

The injury or illness was considered to be in scope if the respondent first became aware of it in the last 12 months, even though the cause of the injury or illness may have occurred outside the 12 month reference period. Included are injuries or illnesses that occurred while commuting to and from work, outside the place of work but while on work duty, or during work breaks.

Information was collected about the respondent's most recent work-related injury or illness if there was more than one work-related injury or illness in the reference period.

Acronyms

A

ABN	Australian Business Number
ABR	Australian Business Register
ABS	Australian Bureau of Statistics
ABSBR	ABS Business Register
ABSEUM	ABS Economic Units Model
AC	Auto Coding
ANZ	Australia and New Zealand Banking Group
ANZSCO	Australian and New Zealand Standard Classification of Occupations
ANZSIC	Australian and New Zealand Standard Industrial Classification
ARA	Any Responsible Adult
ASCED	Australian Standard Classification of Education
ASCL	Australian Standard Classification of Languages
ASCO	Australian Standard Classification of Occupations
ASGC	Australian Standard Geographical Classification
ASGS	Australian Statistical Geography Standard
ASIC	Australian Standard Industrial Classification
ASNA	Australian System of National Accounts
ATO	Australian Taxation Office
AWCE	Average Weekly Cash Earnings
AWE	Average Weekly Earnings
AWOTE	Average Weekly Ordinary Time Earnings

B

BAS	Business Activity Statement
BFU	Base Frame Unit
BLADE	Business Longitudinal Analysis Data Environment

C

CAC	Computer Assisted Coding
CAI	Computer Assisted Interviewing
CAPI	Computer Assisted Personal Interviewing
CATI	Computer Assisted Telephone Interviewing
CAWI	Computer Assisted Web Interviewing
CCLI	Classification and Classified List of Industries
CCLO	Classification and Classified List of Occupations
CDEP	Community Development Employment Projects
CDP	Community Development Programme
CE	Completely Enumerated
CES	Commonwealth Employment Service
CI	Confidence Interval
COE	Characteristics of Employment Survey
CORMS	Characteristics of Recent Migrants Survey
CURF	Confidentialised Unit Record File

E

EAS	Economic Activity Survey
EEBTUM	Employee Earnings, Benefits and Trade Union Membership Survey
EEH	Employee Earnings and Hours Survey
EG	Enterprise Group
ERP	Estimated Resident Population

F

FBT	Fringe Benefits Tax
FOES	Forms of Employment Survey
FSU	Final Sampling Units

G

GCCSA	Greater Capital City Statistical Area
GDP	Gross Domestic Product
GFS	Government Finance Statistics
GMI	Gross Mixed Income
GNAF	Geocoded National Address File
GSS	General Social Survey

H

HES	Household Expenditure Survey
HILDA	Household Income and Labour Dynamics Australia

I

IC	Indigenous Communities
ICF	Indigenous Community Framework
ICLS	International Conference of Labour Statisticians
ICPSU	Indigenous Community Primary Sampling Units
ICSE	International Conference of Status in Employment
ILC	International Labour Conference
ILO	International Labour Organization
IMF	International Monetary Fund
IOPC	Input-Output Product Classification
ISIC	International Standard Industrial Classification
IVA	Industry Value Added
IVI	Internet Vacancy Index (Department of Employment)

J

JPDA	Joint Petroleum Development Area
JSE	Job Search Experience Survey
JVS	Job Vacancies Survey

K

KILM	Key Indicators of the Labour Market
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L

LE	Legal Entity
LEED	Linked Employer-Employee Database
LFS	Labour Force Survey
LFSS	Labour Force Supplementary Surveys
LGA	Local Government Area
LM	Labour Mobility
LPI	Labour Price Index

M

MB	Mesh Blocks
MFP	Multi-Factor Productivity
MLC	Survey of Major Labour Costs
MPHS	Multipurpose Household Survey
MPS	Monthly Population Survey

N

NDS	National Data Set
NILF	Not In the Labour Force
NOM	Net Overseas Migration
NPI	Not-Profits Institutions

O

OAD	Overseas Arrivals and Departures
OECD	Organisation for Economic Co-operation and Development
OH&S	Occupational Health and Safety
OMIE	Owner Managers of Incorporated Enterprises
OMUE	Owner Managers of Unincorporated Enterprises

P

PD	Private Dwelling
PaETS	Pregnancy and Employment Transitions Survey
PJSM	Participation, Job Search and Mobility Survey
PIT	Personal Income Tax
PNILF	Persons Not In the Labour Force Survey
PPL	Paid Parental Leave
PSF	Population Survey Framework
PUR	Place of Usual Residence

Q

Q&W	Qualifications and Work
QBIS	Quarterly Business Indicators Survey

R

RA	Remoteness Area
RADL	Remote Access Data Laboratory
RBA	Reserve Bank of Australia
RJCP	Remote Jobs and Community Program
R&RI	Retirement and Retirement Intentions Survey
RSE	Relative Standard Error

S

SA	Statistical Areas
SACC	Standard Australian Classification of Countries
SD	Special Dwelling
SDAC	Survey of Disability, Ageing and Carers
SE	Standard Error
SEARS	Survey of Employment Arrangements, Retirement and Superannuation
SEAS	Survey of Employment Arrangements and Superannuation
SEASABS	SEASonal analysis, ABS standards
SEE	Survey of Employment and Earnings
SESCA	Standard Economic Sector Classification of Australia
SEW	Survey of Education and Work
SGC	Superannuation Guarantee Charge
SIH	Survey of Income and Housing
SISCA	Standard Institutional Sector Classification of Australia
SIH	Survey of Income and Housing
SNA	System of National Accounts
SoS	Section of State
SRA	Self-Representing Area
SSS	Special Social Surveys
STEP	Structured Training and Employment Project
SUPC	Supply Use Product Classification

T

TAU	Type of Activity Unit
TOBE	Type of Business Entity
TOLO	Type of Legal Organisation
TOOCS	Type of Occurrence Classification System

U

UCL	Urban Centre and Locality
UEW	Underemployed Workers Survey
UR	Usual Resident

V

VET	Vocational Education Training
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W

WPI	Wage Price Index
WRI	Work-Related Injuries Survey
WTA	Working Time Arrangements Survey